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ZOQUE VI: TEXT*

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15.0. Introduction to text
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15.0. The story of the clever thief here presented was related by Rodrigo Guzmán in Zoque, under the Spanish title of 'El Buen Ladrón'. It is a Zoque version of the Rhampsinitus tale,[50] and is one of a limited number of secular texts in Zoque transcribed from direct dictation by informants; certain of these have already been published in unanalyzed form.[51]

In this story, as in other European folktales of the area, the general features of the tale remain intact, but the setting, characters, and action are adapted where necessary to keep within the limitations of a culture that is Zoque or with which the Zoques have had contact. The chief characters here appear as two compadres (co-godfathers) and the wife of one of these, to whom the other naturally applies the term comadre (co-godmother). The reciprocal use of the term compadre throughout the story to identify both male characters appears confusing at first blush; but in each instance the context together with the linguistic form (with or without suffix 611) is such as to prevent ambiguity; and in terms of contemporary Zoque social structure this type of reference is quite in keeping with the prominence of the co-godparent relationship. A further bit of cultural adaptation is in the fact that the king (who as such has no counterpart in the culture and for whom the only word used is the Spanish loan) fits largely into the role that might be played by any local big shot. This is hinted, for example, in items 110–118 of the text, where the absence of a class 520 suffix implies that it is with his own hands that the king prepares a pitfall of carpenter's glue in a kettle (the type of large copper kettle used in the culture for boiling sugar-cane juice), and that his intent was to personally find the thief and put him to death. Other ways in which the story fits the culture include the use of pack mules, the transportation of liquor in kegs rather than in skins, and the use of comiteco, a type of whiskey made in Comitán, Chiapas, and known throughout the state.

Each numbered phrase or sentence of the text in **15.1** is followed by an analysis in brackets which gives, for each word or clitic, its word-class symbol plus a translation. The symbol (*) before a word-class symbol corresponds to syntactic word divi-

* This paper concludes a series on Zoque structure; for Zoque I–V see IJAL 17.1–9, 105–23, 137–62, 235–51 (1951); 18.35–48 (1952).

[50] Type 940 in Aarne and Thompson, The Types of the Folk-Tale. FF Communications 74.142 (1928).

[51] For bibliography see the fourth and sixth items under Wonderly in **0.2** (IJAL 17.9, 1951). Work with text materials has to date formed a comparatively small but important part of my work on Zoque; greater emphasis has been placed upon actual participation in conversation with native speakers and in acquiring a modicum of fluency in the language. This has been accompanied by preparation of translated materials (Biblical and other; for some of these see the three items listed by their Zoque titles in **0.2**) in collaboration with native informants; these translations also constitute authentic texts in the sense that they have been checked with native speakers, but they are of course not original Zoque materials. More recently a few texts have been recorded on tape; these are as yet mostly untranscribed.

sion, except when one or both of the items so separated is proclitic or enclitic, when the division is marked by (—) in the analysis; cf. **4.0.** Word translations may be followed by morphological analyses in parentheses; those not so followed are, for the most part, items that have been analyzed earlier in the same text or are closely similar in structure to forms that have been so analyzed.

Certain additional symbols are introduced. The word-class symbol Vb appears throughout the text analysis as Vb_i (= intransitive verb; see **5.2**), Vb_t (= transitive verb; see **5.2**), or Vb_{tt} (= transitive verb with two objects, not treated separately from Vb_t in **5.2**); Vb_{ttt} and Vb_{tttt} forms are also possible but do not appear in the text.[52] The word-class symbols Nn and Prn appear in the text analysis as Nn_r and Prn_r when the sequence contains suffix 611; the subscript $_r$ stands for relative case (= genitive or subject of a transitive verb in the terminology of the preceding sections; the term relative is here introduced not only to provide a one-word label but because these two meanings of suffix 611 are actually equivalent in terms of Zoque structure). An affix number in italics indicates that the affix appears in the sequence under analysis as a zero alternant; words that translate such zero alternants are followed by the symbol (⁰). Especially relevant here are the class 130 prefixes, which frequently appear as phonemic zero by one or more of the morphophonemic operations of **3.2.5**, **3.3**, and **3.10.2**; in the preceding sections of this work the class 130 prefixes were omitted from the specific formulae when thus reduced to zero.

The problem of implicit categories[53] is one that has not been adequately investigated for Zoque, but one which is not easily bypassed in setting up an analytical translation unless we are to set up certain zero morphemes not postulated previously. In the present treatment we tentatively assume certain categories as implicit in morphemes or morpheme sequences that have another primary meaning; and we place their translations after the translations of the forms with which they appear to be associated. Specifically, a Vb_i without an auxiliary contains an implicit 1st or 3rd person subject if prefix 133 is not present to mark 2nd person subject (for examples see in items 1, 15, 33 of text). A Vb_t or Vb_{tt} (with or without an auxiliary) contains an implicit 3rd person subject with 1st person object if no class 130 prefix is present to mark a different subject and/or object (see item 221 of text). Vb_{tt} forms are considered as having their second object implicit whether a 130 prefix is present or not (see items 5, 45 of text). In all of these the implicit category is probably to be associated with the verb stem (V); in the case of objects of imperative Vb_t forms and first objects of imperative Vb_{tt} forms, none of which contain a 130 prefix, the object is probably to be considered as implicit in the suffix 563 or 564 which marks the imperative (see items 25, 31, 43 of text).

Where two or more English words translate one Zoque word in the analytical translation in **15.1**, they are joined by hyphens and their order generally follows the order of the corresponding Zoque morphemes in the word. However, one English word frequently translates two or more morphemes simultaneously, and when these translated morphemes are non-continguous the morpheme order is not preserved in the translation; e.g. ñʌhayahu *they-him-said-to* (132 +

[52] For example, Vb_{ttt} nyahci²u *I* (or *you*) *caused him to give it to you* (or *me* or *him*) (= 131 + 21 + V^1 ci²- *to give* + 561) and Vb_{tttt} nyahci²hayu *I* (or *you*) *caused him to give it to him for you* (or *me* or *him*) (= 131 + 21 + V^1 *to give* + 511 + 561) are possible forms. The need for further attention to this feature of degrees of transitivity was suggested to me by Aschmann; see now Herman Aschmann and William L. Wonderly, Affixes and Implicit Categories in Totonac Verb Inflection, IJAL 18.130–45 (1952).

[53] See Aschmann and Wonderly, op. cit. in fn. 52.

V^1 *to-say* + 511 + 532 + 561), in which *they* translates the combined value of 132 and 532. And even more frequently the English translation gives only part of the possible range of meanings; e.g. ʔihtu *existed-he* (V^1 *to-exist* + 561; item 1 of text) means, except for contextual limitations, *existed or exists any 1st, 2nd, or 3rd person regardless of number or sex*. Class 130 prefixes, which often potentially mark several persons but do not mark number, are translated by English pronouns having the contextually appropriate person and number; prefixes which mark both subject and object are translated by two English pronouns in that order. For example, in ñʌhayahu as cited above, prefix 132 is translated *they-him*; depending upon context the same prefix may be translated *he-them, they-them, she-him, he-him, it-it*, etc.

In a recent article, Voegelin[54] discusses the theoretical basis of translation, distinguishing between two types of linguistic translation: morpheme-by-morpheme (= literal) translation and free translation. He characterizes the latter[55] in the terminology of communications engineering by mentioning the inevitable lack of complete information-correspondence between a text and its free translation, especially into a structurally dissimilar language. Our analytical translation in **15.1** (so named to avoid the term 'literal', which for this very reason it is not) shows, as implied in the preceding paragraph, some of this same lack. In terms of information-correspondence, our analytical translation deliberately omits certain items of information: the various possible but contextually irrelevant person-categories of class 130 prefixes are omitted; the meaning of suffix 611 in Nn_r and Prn_r forms is unglossed when the forms are subjects of transitive verbs (because no gloss exists in English; the gloss *-'s* or the possessive form of the English pronoun is used when suffix 611 means genitive); the meanings of suffixes 561 and 564 are omitted in translating verbs preceded by an auxiliary (cf. **5.6.1**); the difference in meaning between suffix 616 and suffix 618 is not translationally indicated (see items 66 and 160 of text); and so on. The analytical translation also introduces certain items of pseudo-information: gender is introduced wherever a 3rd person subject, object, or possessor is translated by a singular 3rd person pronoun (e.g. *his* vs. *her* in translation of identical forms in items 3 and 170 of text); number is introduced wherever a noun lacking suffix 641 or a verb lacking a class 530 suffix is translated by an English singular or plural form (because such Zoque forms are neither singular nor plural in the English sense but simply do not show number). And for still other items of information in the text the analytical translation substitutes pseudo-information: for example, suffixes 561 and 562, which mark aspectual meanings foreign to English, are translated respectively by the partially analogous past and present tenses (usually; but certain contexts lead to departure from this).

Voegelin mentions this lack of information-correspondence as characteristic of free translations, but implies that a literal or morpheme-by-morpheme translation is possible which would not suffer this defect—even when translating between languages as dissimilar structurally as Kickapoo and English. To make our analytical translation from Zoque into English literal in this sense it would be necessary, among other things, to re-define English noun stems as numberless and English verbs (to be used always in their uninflected form) as tenseless, numberless, and personless; and to translate person-prefixes by some genderless and numberless device such as i, ii, iii for the three persons respectively; i.e. to eliminate all categories of English inflection from use in the literal translation. Zoque categories having no gloss in English would be rendered by their descriptive terms or by semi-

[54] C. F. Voegelin, Culture, Language, and the Human Organism, SJA 7.357–73 (1951).

[55] Op. cit., p. 360.

arbitrary English words approximating the grammatical meanings involved. The result would be a codification in semantic terms that would correspond in one-to-one fashion with our number formulae, which themselves constitute a codification in non-semantic terms. Such a literal translation was begun for the present Zoque text but was modified because of its unwieldiness and non-English character (it would have the form of an artificial language with quasi-Zoque structure and quasi-English lexics) and because of its close parallelism to and near-duplication of our already-used non-semantic codification.[56]

15.1. Text with analytical translation.

1. ʔihtu teʔrˑiko. [Vb_i *existed-he* (= V^1 ʔiht- *to-exist* + 561) # Dm *the* (= D teʔ)—Nn *rich-man* (= N^1 rˑiko).] 2. ʔi nuʔmbawʌteʔ. [Pcl *and* (= Pc ʔi) # Ppl *robber* (= Pp nuʔmbawʌ {= Vb_i nuʔmba *steals-he* [= V^1 nuʔm- + 562] + 411})—Dm *the-fact* (predication marker).] 3. ñʌhapya teʔkyompagre, [Vb_t *he-him-says-to* (= 132 + V^1 nʌm- ~ nʌ- *to-say* + 511 + 562) # Dm *the*—Nn *his-compadre* (= 132 + N^1 kompagre *compadre*),] 4. hene mis ŋgenba toya. [Atr *much* (= At^1) # Prn_r *you* (= Pr^1 mih + 611) # Vb_t *you-it-see* (= 131 + V^1 ken- *to-see* + 562) # Nn *suffering* (= N^2 {= V^1 toy- *to-hurt* + 315}).] 5. maʔsmih nuʔksčiʔu ʔʌs libru. [Aux *am-going* (= Au^1 ma future)—Prn_r *I* (= Pr^1 ʔʌh ~ -ʔh *I* + 611)—Prn *you* (= Pr^1) # Vb_{tt} I^0-*you*^{0}-*to-lend-it* (= *131* + V^2 nuʔksčiʔ- *to-lend* {= V^1 nuʔks- *to-borrow* + V^1 ciʔ- *to-give*} + 561 # Prn_r *my* (= Pr^1 ʔʌh + 611) # Nn *my*^{0}-*book* (= *131* + N^1 libru *book*).] 6. waʔmis ŋgenu nhucʌ nʌ nyohsu. [Aux *that* (= Au^1 waʔy subordinative)—Prn_r *you* # Vb_t *you-it-to-see* (= 131 + V^1 ken- *to-see* + 561) # Atr *how* (= At^1) # Aux *am* (= Au^1 nʌ continuative) # Vb_i *I-working* (= 131 + V^1 yohs- *to-work* + 561).] 7. porke ʔʌh nʌwaʔmʌhteʔ rˑikoʔahu. [Pcl *because* (= Pc) # Prn *I* (= Pr^1) # Aux *am-already* (= Au^2 {= Au^1 nʌ + 562} + 721)—Prn I—Dm *the-fact* # Vb_i I^0-*getting-rich* (= *131* + V^2 rˑikoʔah- *to-get-rich* {= N^1 *rich* + 231} + 561).] 8. ʔi ŋgenuʔkamis, [Pcl *and* # Vb_t *you-it-see-when-already* (= 131 + V^1 *to-see* + 561 + 712 + 721)—Prn_r *you*,] 9. minbamis ncahku ʔʌs ndʌhkaŋʌ. [Aux *will-come* (= Au^2 minba {= V^1 min- *to-come* + 562})—Prn_r *you* # Vb_t *you-it-to-leave* (= 131 + V^1 cahk- *to-leave* + 561) # Prn_r *my*—Nn *my-house-at* (= 131 + N^1 tʌhk(-) *house* + 616).] 10. huka neʔ haʔnmih mini, [Pcl *if* (= Pc) # Int *yourself* (= In) # Aux *do-not* (= Au^1 haʔn negative)—Prn *you* # Vb_i *you*^{0}-*to-come* (= *133* + V^1 min- *to-come* + 564),] 11. minbaʔs mbʌhku teʔlibru mis ndʌhkaŋʌ. [Aux *will-come*—Prn_r *I* # Vb_t *I-it-to-get* (= 131 + V^1 pʌhk- *to-get* +561) # Dm *the*—Nn *book* # Prn_r *your* # Nn *your-house-at* (= 131 + N^1 *house* + 616).]

[56] We give as a sample, such a literal translation for items 1–6 and 29 of the text (see these items in **15.1** for the text forms and the non-semantic formulae). Here items joined by hyphens or by diagonals combine to translate single morphemes; the diagonals separate meanings that are potentially present in the morpheme but limited by context. The symbol (+) joins translations of different morphemes within a word or clitic just as it joins symbols for morphemes in the non-semantic formulae. Note the equivalence between this codification and the corresponding non-semantic formulae in **15.1**. (More extensive abbreviation and arbitrary symbolism would somewhat reduce the unwieldiness of this codification, probably at the expense of its already attenuated English character.) 1. [Vb_i *exist*-i/ii/iii-subj. + completive # Dm *the*—Nn *rich-man*.] 2. [Pcl *and* # Ppl *robber* (= {*steal*-i/ii/iii-subj. + incompletive} + *the-one*)—Dm *the-fact*.] 3. [Vb_t iii-subj.-iii-obj. + *say* + *to* + incompletive # Dm *the*—Nn iii + *compadre*,] 4. [Atr *much* # Prn_r *you* + relative # Vb_t i/ii-subj.-i/ii/iii-obj. + *see* + incompletive # Nn *suffering* (= *hurt* + result).] 5. [Aux *go*—Prn_r *I* + relative—Prn *you* # Vb_{tt} i/ii-subj.^{0}-i/ii/iii-obj.^{0} + *lend*-iii-obj. (= *borrow* + *give*-iii-obj.) + dependent-on-auxiliary # Prn_r *I* + relative # Nn i/ii^0 + *book*.] 6. [Aux *that*—Prn_r *you* + relative # Vb_t i/ii-subj.-i/ii/iii-obj. + *see* + dependent-on-auxiliary # Atr *how* # Aux *be* # Vb_i i-subj. + *work* + dependent-on-auxiliary.]. . . 29. [Pcl *because* # Aux *go* # Vb_t iii-subj.-iii-obj. + *know* + iii-plural + dependent-on-auxiliary # Dm *the*—Nn_r *human-being* + relative.]

12. pihče?ka kyenu ke ha?n minu čahku te?libru te?kyompagre?s. [Atr *then* (= At^{1} pihče- + 712 + 721) // Vb$_{t}$ *he-it-saw* (= 132 + V^{1} *to-see* + 561) // Pcl *that* (= Pc) // Aux *does-not* // Aux *to-come* (= Au^{2} {= V^{1} *to-come* + 561}) // Vb$_{t}$ *he-it-to-leave* (= 132 + V^{1} *to-leave* + 561) // Dm *the*—Nn *book* // Dm *the*—Nn$_{r}$ *his-compadre* (= 132 + N^{1} *compadre* + 611).] 13. pihče?ka maŋu pyʌhku. [Atr *then* // Aux *went* (= Au^{2} {= V^{1} maŋ- *to-go* + 561}) // Vb$_{t}$ *he-it-to-get* (= 132 + V^{1} *to-get* + 561).] 14. ñʌmhayu, muspaha te?istorya. [Vb$_{t}$ *he-him-said-to* (= 132 + V^{1} nʌm- *to-say* + 511 + 561), // Vb$_{t}$ *you*^{0}-*it*^{0}-*knew*-interrogative (= *131* + V^{1} muhs- *to-know* + 562 + 751) // Dm *the*—Nn *story* (= N^{1} ?istorya).] 15. te?kyompagre nʌmu, [Dm *the*—Nn *his-compadre* // Vb$_{i}$ *said-he* (= V^{1} *to-say* + 561).] 16. muspa?mʌs suñita?mbʌ. [Vb$_{t}$ *I*^{0}-*it*^{0}-*know-already* (= *131* + V^{1} *to-know* + 562 + 721)—Prn$_{r}$ *I* // Ppl *pretty-ones* (= Pp {= Atr suñita?m- *pretty*-plural [= At^{1} suñi *pretty* + 641] + 411}).] 17. ?ihtu te?kopʌn te?librukʌsi. [Vb$_{i}$ *exists-it* // Dm *the*—Nn *animal* (= N^{2} {= 52 + N^{1} pʌn *man* or *insect*}) // Dm *the*—Nn *book-on* (= N^{1} *book* + 621).] 18. ha?nde? te?wʌ?s ncambawʌ?s [Aux *not* (= Au^{1} negative)—Dm *the-fact* // Ppl *that-one* (= Pp te?wʌ *that* {= D + 411})—Prn$_{r}$ *I* // Ppl *which-I-speak* (= Pp ncambawʌ {= Vb$_{t}$ ncamba *I-it-speak* [= 131 + V^{1} cam- *to-speak* + 562] + 411})—Prn$_{r}$ *I*,] 19. ñʌhayu te?kyompagre. [Vb$_{t}$ *he-him-said-to* (= 132 + V^{1} *to-say* + 511 + 561) // Dm *the*—Nn *his-compadre*.] 20. ?ʌs sunba?s wa?mis ?aŋmayu te?orasyóŋ. [Prn$_{r}$ *I* // Vb$_{t}$ *I*^{0}-*it*^{0}-*want* (= *131* + V^{1} sun- *to-want* + 562)—Prn$_{r}$ *I* // Aux *that* (= Au^{1} wa?y)—Prn$_{r}$ *you* // Vb$_{t}$ *you*^{0}-*it*^{0}-*to-learn* (= *131* + V^{2} ?aŋmay- *to-learn* {= 15 + V^{1} may- *to-count*} + 561) // Dm *the*—Nn *prayer* (= N^{1} ?orasyóŋ).] 21. te?šeh wa?mih riko?ahu [Dm *thus* (= D + 732) // Aux *that*—Prn *you* // Vb$_{i}$ *you*^{0}-*to-get-rich* (= *133* + V^{2} *to-get-rich* + 561).] 22. kyompagre nʌmu, [Nn *his-compadre* // Vb$_{i}$ *said-he*,] 23. ha?s hekete? musi te?letra. [Aux *do-not* (= Au^{1} ha?n ~ ha- negative)—Prn$_{r}$ *I* // Pcl *then* (= Pc heke) Dm *the-fact* // Vb$_{t}$ *I*^{0}-*it*^{0}-*to-know* (= *131* + V^{1} *to-know* + 564) // Dm *the*—Nn *letters* (= N^{1} letra).]

24. pihče?ka ñʌhayu te?kyompagre?s, [Atr *then* // Vb$_{t}$ *he-him-said-to* // Dm *the*—Nn$_{r}$ *his-compadre*,] 25. ci?ʌ?ʌh te?libru. [Vb$_{tt}$ *give-it-me* (= V^{1} ci?- *to-give* + 563)—Prn *me* // Dm *the*—Nn *book*.] 26. ?i ?alistacʌkʌ homih. [Pcl *and* // Vb$_{i}$ *get-ready* (= V^{2} ?alistacʌhk- {= Span. loan + V^{1} cʌhk- *to-do*} + 563) // Atr *tomorrow* (= At^{1}).] 27. ma?smih nʌmaŋu. [Aux *am-going* (= Au^{1})—Prn$_{r}$ *I*—Prn *you* // Vb$_{t}$ *I*^{0}-*you*^{0}-*to-take* (= *131* + V^{2} nʌmaŋ- *to-take* {= 13 + V^{1} maŋ- *to-go*} + 561).] 28. camha?s komagre ?uy yahtiyʌ čamu. [Vb$_{tt}$ *speak-it-to-her* = V^{1} *to-speak* + 511 + 563)—Prn$_{r}$ *my* // Nn *comadre* // Aux *that-not* (= Au^{1} negative subordinative) // Prn *nothing* (= Pr^{2} {= 81 + Pr^{1} tiyʌ *thing*}) // Vb$_{t}$ *she-it-to-speak* (= 132 + V^{1} *to-speak* + 561).] 29. porke ma myuhšahu te?kristyano?s. [Pcl *because* // Aux *are-going* (= Au^{1}) // Vb$_{t}$ *they-it-to-know* (= 132 + V^{1} *to-know* + 532 + 561) // Dm *the*—Nn$_{r}$ *people* (= N^{1} kristyano *human-being* + 611).] 30. huka kyʌ?aŋwa?kyahpa te?kristyano?s, [Pcl *if* (= Pc) // Vb$_{t}$ *they-it-ask-about* (= 132 + V^{3} kʌ?aŋwa?k- *to-ask-question* {= 12 + 15 + V^{1} wa?k- *io-ask-for*} + 532 + 562) // Dm *the*—Nn$_{r}$ *people*,] 31. yahnʌmʌ, [Vb$_{t}$ *cause-her-to-say* (= V^{2} *to-cause-to-say* {= 21 + nʌm- *to-say*} + 563),] 32. maŋyahu byahe?ohmo. [Vb$_{i}$ *went-they* (= V^{1} *to-go* + 532 + 561) // Nn *trip-in* (= N^{1} byahe *trip* + 617).] 33. myentras tʌh witu?pa. [Pcl *while* (= Pc) // Prn *we* // Vb$_{i}$ *return-we* (= V^{2} witu?- *to-return* {= V^{1} wiht- *to-walk* + 214} + 562).] 34. pihče?ka te?kyompagre?s ñʌmhayu, [Atr *then* // Dm *the*—Nn$_{r}$ *his-compadre* // Vb$_{t}$ *he-him-said-to*,] 35. te?a minʌ pʌkʌ te?kopʌn, [Dm *there-now* (= D *the-fact* + 721) // Vb$_{i}$ *come* (= V^{1} *to-come* + 563) // Vb$_{t}$ *get-it* (= V^{1} *to-get* + 563) // Dm *the*—Nn *animal*,] 36. wa?ytʸʌ nʌmaŋu. [Aux *that*—Prn *we* // Vb$_{t}$ *we*^{0}-*it*^{0}-*to-take*.]

37. pihče?ka maŋyahu. [Atr *then* # Vb_i *went-they* (= V^1 *to-go* + 532 + 561).] 38. tu?ŋohma?a, ñʌmhapya te?kyompagre, te?-riko, [Nn *road-in-already* (= N^1 tuŋ *road* + 617 + 721), # Vb_t *he-him-said-to* # Dm *the*—Nn *his-compadre*, # Dm *the*—Nn *rich-one*,] 39. hene mih nʌ riko?ahu, kompagre. [Atr *much* # Prn *you* # Aux *are* # Vb_i *you⁰-getting-rich* (= *133* + V^2 *to-get-rich* + 651), # Nn *compadre*.] 40. nhutʌ heke ma mbʌhku te?tumin, [Atr *where* (= At^1) # Pcl *then* # Aux *are-going* # Vb_t *you-it-to-get* (= 131 + V^1 *to-get* + 561) # Dm *the*—Nn *money* (= N^1 tumin),] 41. ñʌmhayu te?-kyompagre. [Vb_t *he-him-said-to* # Dm *the*—Nn *his-compadre*.] 42. pihče?ka ñʌmhayu, [Atr *then* # Vb_t *he-him-said-to*,] 43. ?uy yahtiyʌ came. [Aux *do-not* (= Au^1 negative imperative) # Prn *nothing* # Vb_t *speak-it* (= V^1 *to-speak* + 564).] 44. ?asta ke mis ŋgenba, [Pcl *until* # Pcl *that* # Prn_r *you* # Vb_t *you-it-see* (= 131 + V^1 *to-see* + 562),] 45. pihče?ka?smih ncamhapya. [Atr *then*—Prn_r *I*—Prn *you* # Vb_{tt} *I-you-speak-it-to* (= 131 + V^1 *to-speak* + 511 + 562).]

46. tu?ŋahyahu te?tumʌ cu?. [Vb_i *journeyed-they* (= V^2 tu?ŋah- *to-journey* {= N^1 *road* + 231} + 532 + 561) # Dm *the*—Num *one* (= Nm^1 tum- *one* + 812) # Nn *night* (= N^1).] 47. nu?kyahu te?re?is tʸʌhkaŋʌ. [Vb_i *arrived-they* (= V^1 nu?k- *to-arrive* + 532 + 561) # Dm *the*—Nn_r *king's* (= N^1 rey *king* + 611) # Nn *his-house-at* (= 132 + N^1 *house* + 616).] 48. ?i te?re?is tʸʌk ?yukaŋʌ?mʌk ?ihtu te?bentana. [Pcl *and* # Dm *the*—Nn_r *king's* # Nn *his-house* # Nn *its-rear-at* # Vb_i *existed-it* # Dm *the*—Nn *window*.] 49. pihče?ka te?riko?s tʸʌŋgi?mu te?reata te?bentanakʌsi. [Atr *then* # Dm *the*—Nn_r *rich-one* # Vb_t *he-it-threw-upwards* (= 132 + V^2 tʌŋgi?m- *to-throw-upwards* {= V^1 tʌŋ- *to-throw* + V^1 ki?m- *to-go-up*} + 561) # Dm *the*—Nn *rope* # Dm *the*—Nn *window-on* (= N^1 *window* + 621).] 50. pihče?ka ñʌmhayu te?kyompagre, [Atr *then* # Vb_t *he-him-said-to* # Dm *the*—Nn *his-compadre*,] 51. maŋba?ʌh ŋgi?mu, [Aux *am-going* (= Au^2 maŋba {= V^1 *to-go* + 562})—Prn *I* # Vb_i *I-to-go-up* (= 131 + V^1 *to-go-up* + 561),] 52. wa?s maŋu nʌpuhtu tumin. [Aux *that*—Prn_r *I* # Aux *to-go* (= Au^2 maŋu {= V^1 *to-go* + 561}) # Vb_t I^0-*it⁰-to-take-out* (= *131* + V^2 nʌpuht- *to-take-out* {= 13 + V^1 puht- *to-go-out*} + 561 # Nn *money*.] 53. ?i mis nho?kpamis yʌy. [Pcl *and* # Prn_r *you* # Vb_t *you-me-wait-for* (= 131 + V^1 ho?k- *to-wait* + 562)—Prn_r *you* # Dm *here* (= D yʌ? *this* + 619).] 54. ?i ?umis nya?aŋ-hʌyu te?tumincʌmi. [Pcl *and* # Aux *that-not*—Prn_r *you* # Vb_t *you-it-to-cause-to-sound* (= 131 + V^3 ya?aŋhʌy- *to-cause-to-sound* {= 21 + V^2 ?aŋhʌy- *to-sound* [= 15 + V^1 hʌy- *to-weep*]) + 561) # Dm *the*—Nn *money-load* (= N^3 {= N^1 *money* + N^2 cʌmi *load* [= V^1 cʌm- *to-carry* + 314]}).] 55. ha?n tiyʌ čʌki, [Aux *does-not* # Prn *thing* # Vb_t *it-it-to-do* (= 132 + V^1 *to-do* + 564)] 56. nʌmu te?kyompagre. [Vb_i *said-he* # Dm *the*—Nn *his-compadre*.]

57. pihče?ka ki?mu te?kyompagre. [Atr *then* # Vb_i *went-up-he* # Dm *the*—Nn *his-compadre*.] 58. ?aŋgi?mʌcahku te?kyompagre. [Vb_t? *he?-him?-left-under-orders* (= V^4 {= V^2 ?aŋgi?m- *to-order* [= 15 + V^1 ki?m- *to-go-up*] + 251 + V^1 cahk- *to-leave*} + 561) # Dm *the*—Nn *his-compadre*.] 59. maŋu ñʌpuhtu te?tumincʌmi. [Aux *went* # Vb_t *he-it-to-take-out* # Dm *the*—Nn *money-load*.] 60. maŋute? ñʌnu?mu te?kyompagre. [Aux *went*—Dm *the-fact* # Vb_t *he-him-to-steal-with* (= 132 + V^2 {= 13 + V^1 *to-steal*} + 561) # Dm *the*—Nn *his-compadre*.] 61. porke te?kyompagre hene pogrete?. [Pcl *be-cause* # Dm *the*—Nn *his-compadre* # Atr *very* # Atr *poor* (= At^1)—Dm *the-fact*.] 62. pihče?ka ñʌwanahku te?tumin. [Atr. *then* # Vb_t *he-it-lowered* (= 132 + V^2 nʌwanahk- {= 13 + V^1 wanahk- *to-go-down*} + 561) # Dm *the*—Nn *money*.] 63. ñicʌmi?ʌyahu meca te?kopʌn. [Vb_t *they-them-loaded* (= 132 + V^4 {= 14 + N^2 *load* + 241} + 532 + 561) # Num *two* (= Nm^1 mec- *two* + 811) # Dm *the*—Nn *animal*.] 64. komo tʸo?ya?ŋʌpya te?kyompagre, [Pcl *as* # Vb_t *he-him-pities* (= 132 + V^3 to?ya?ŋʌy- *to-*

pity {= N^2 to?ya?ŋ- [= toy- *to-hurt* + 313] + 241} + 562) # Dm *the*—Nn *his-compadre*,] 65. či?u tumʌ kopʌ?noyh te?tumincʌmi. [Vb_{tt} *he-him-gave-it* (= 132 + V^1 *to-give* + 561) # Num *one* # Nn *animal-full* (= N^2 *animal* + 618) # Dm *the*—Nn *money-load*.] 66. cu?kumyahu, maŋyahu te?tʸʌhkaŋʌ. [Vb_i *went-out-they* (= V^1 cu?kum- *to-go-out* + 532 + 561), # Vb_i *went-they* # Dm *the*—Nn *their-house-at* (= 132 + N^1 *house* + 616).] 67. ?aŋgi?mʌcahku te?kyompagre ?i te?kyomagre. [Vb_t? *he?-them?-left-under-orders* # Dm *the*—Nn *his-compadre* # Pcl *and* # Dm *the*—Nn *his-comadre*.] 68. ?i ñe?kʌ maŋu te?tʸʌhkaŋʌ. [Pcl *and* # Prn *he* (= Pr^3 {= 132 + In + 312}) # Vb_i *went-he* # Dm *the*—Nn *his-house-at*.] 69. ñʌmaŋge?tu te?kopʌn. [Vb_t *he-it-took-also* (= 132 + V^2 *to-take* + 551 + 561) # Dm *the*—Nn *animal*.]

70. ho?pit taŋbʌ?nʌmu. [Atr *next-day* # Vb_i *dawned-it* (= V^2 taŋbʌ?nʌm- {= taŋbʌ?- + 261} + 561).] 71. maŋu bisitacʌhku te?kyompagre. [Aux *went* # Vb_t *he⁰-him⁰-to-visit* # Dm *the*—Nn *his-compadre*.] 72. pihče?ka ñʌhapya te?kyompagre, [Atr *then* # Vb_t *he-him-says-to* # Dm *the*—*his-compadre*,] 73. te?nci?upʌ?smih te?tumin, [Dm *the*—Ppl nci?upʌ *which-I-you-gave* (= Vb_{tt} nci?u *I-you-gave-it* + 411)—Prn_r *I*—Prn *you* # Dm *the*—Nn *money*,] 74. ?umis maŋu ncamu nhutʌ mis mbʌhku. [Aux *that-not*—Prn_r *you* # Aux *to-go* # Vb_t *you-it-to-speak* # Atr *where* # Prn_r *you* # Vb_t *you-it-got*.] 75. nʌyosa te?tumin. [Vb_t *use-it* (= V^2 nʌyohs- *to-use* {= 13 + V^1 *to-work*} + 563) # Dm *the*—Nn *money*.] 76. minba?smih ?oto?ŋʌkye?tu tukutuhta? hamakʌsi. [Aux *will-come*—Prn_r *I*—Prn *you* # Vb_t *I⁰-you⁰-to-speak-to-again* (= *131* + V^2 ?oto?ŋʌy- *to-speak-to* {= V^1 ?otoŋ- *to-speak* + 241} + 551 + 561) # Num *eight* (= Nm^2 tukutuht- *eight* + 811 + 821) # Nn *days-on* (= N^1 hama *day* + 621).] 77. huka nʌmis muhsu, [Pcl *if* # Aux *are*—Prn_r *you* # Vb_t *you⁰-it⁰-knowing*,] 78. nʌyosa te?tumin. [Vb_t *use-it* # Dm *the*—Nn *money*.] 79. te?wʌpittih rʻiko?ahpamih. [Ppl *that-by-just* (= Pp te?wʌ *that* {= Dm *the* + 411} + 613 + 741) # Vb_i *you⁰-will-get-rich* (= *133* + V^2 *to-get-rich* + 562)—Prn *you*.]

80. ta?nu te?tukutuhta? hama, [Vb_i *became-complete-it* (= V^1 ta?n- *to-become-complete* + 561) # Dm *the*—Num *eight* # Nn *days*,] 81. maŋge?tu, [Vb_i *went-he-again* (= V^1 *to-go* + 551 + 562),] 82. wa?y kyenu huka nʌ ñʌyohsu te?tumin te?kyompagre?s. [Aux *that* # Vb_t *he-it-to-see* # Pcl *if* # Aux *is* # Vb_t *he-it-using* # Dm *the*—Nn *money* # Dm *the*—Nn_r *his-compadre*.] 83. pihče?ka ñʌmhayu, [Atr *then* # Vb_t *he-him-said-to*,] 84. nʌ?ihtumaha te?tumin. [Vb_t *you⁰-it⁰-have-still*-interrogative (= *131* + V^2 nʌ?iht- *to-have* {= 13 + V^1 *to-exist*} + 561 + 742 + 751) # Dm *the*—Nn *money*.] 85. te?kyompagre nʌmu, [Dm *the*—Nn *his-compadre* # Vb_i *said-he*,] 86. hañʌ?ita?mʌs. [Vb_t *not-I⁰-it⁰-have-already* (= 121 + *131* + V^2 *to-have* + 563 + 721)—Prn_r *I*.] 87. ?i tiya?nde? nʌ ñʌcʌhku, ñʌmhayu. [Pcl *and* # Prn *what-now* (= Pr^1 tiyʌ *what* + 721)—Dm *the-fact* # Aux *is* # Vb_t *it-you-doing-with*? (= 133? + V^2 nʌcʌhk- + 561), # Vb_t *he-him-said-to*.] 88. yahwa?a. [Vb_i *ended-it-already* (= V^1 yah- *to-end* + 561 + 721).]

89. pwes ?uy yahtiyʌ came. [Pcl *then* # Aux *do-not* # Prn *nothing* # Vb_t *speak-it*.] 90. nʌmaŋge?tpama?smih. [Vb_t *I⁰-you⁰-will-take-again-still* (= *131* + V^2 *to-take* + 551 + 562 + 742)—Prn_r *I*—Prn *you*.] 91. ma?ndʌ. [*let-us-go* (= irreg. Vb_i form; cf. V^1 maŋ- *to-go*).] 92. ma ncʌhkiske?tu. [Aux *are-going* # Vb_t *we-it-to-try-again* (= 131 + V^2 cʌhkihs- *to-try* {= V^1 *to-do* + V^1 ?ihs- *to-see*} + 551 + 561).] 93. pweda ser huka rʻiko?ahpamih. [Span. loan *it-may* # Span. loan *be* # Pcl *if* # Vb_i *you⁰-get-rich*—Prn *you*.] 94. homih tʌ ma?ndʌ, [Atr *tomorrow* # Prn *we* # Vb_i *let-us-go*,] 95. wa?ytʸʌ nu?ku cu?kʌsi. [Aux *that*—Prn *we* # Vb_i *we⁰-to-arrive* # Nn *night-at* (= Nn *night* + 621).]

96. maŋyahu. [Vb_i *went-they*.] 97. nu?-kyahu ?ʌmʌ, [Vb_i *arrived-they* # Dm *there* (= D ?ʌ? *that* + 331),] 98. tihpamʌy pyʌkyahu te?tumin. [Aux *go-where* (= Au^2

tihpa {= V^1 tih- *to-go-and-return* + 562} + 711) # Vb_t *they-it-to-get* (= 132 + V^1 *to-get* + 532 + 561) # Dm *the*—Nn *money*.] 99. ki?mge?tutih te?kyompagre, te?nu?mbawʌ. [Vb_i *went-up-he-again* (= V^1 *to-go-up* + 551 + 561 + 741) # Dm *the*—Nn *his-compadre*, # Dm *the*—Ppl *robber*.] 100. hʌ?nʌhʌ?nʌ tihu ñʌpuhtu te?tumin. [Atr *very-rapidly* (= reduplicated At^1 hʌ?nʌ *rapidly*) # Aux *went* (= Au^2 {= Au^1 *to-go-and-return* + 562}) # Vb_t *he-it-to-take-out* (= 132 + V^2 nʌpuht- *to-take-out* {= 13 + V^1 *to-go-out*} + 561) # Dm *the*—Nn *money*.] 101. pihče?ka ñicʌmi?ʌyahke?tu te?kopʌn, ?i cu?kumyahu. [Atr *then* # Vb_t *they-them-loaded-again* # Dm *the*—Nn *animals*, # Pcl *and* # Vb_i *left-they*.]

102. taŋbʌ?nʌmu, [Vb_i *dawned-it*,] 103. ñu?kyahke?twa?a t^{y}ʌhkaŋʌ. [Vb_i? *arrived-they-already-again* (= 132? + V^1 *to-arrive* + 532 + 551 + 561 + 721) # Nn *their-house-at*.] 104. pihče?ka te?r·ey nʌmu, [Atr *then* # Dm *the*—Nn *king* # Vb_i *said-he*,] 105. maŋba?ʌs ŋgʌmuhsu, [Aux *am-going*—Prn_r *I* # Vb_t *I-it-to-discover* (= 131 + V^2 kʌmuhs- {= 12 + V^1 *to-know*} + 561),] 106. ?iwʌ?ste? nʌ tihu ñu?mu te?tumin. [Prn_r *who* (= Pr^1 ?iwʌ *who* + 611)—Dm *the-fact* # Aux *is* # Aux *going* # Vb_t *he-it-to-steal* # Dm *the*—Nn *money*.] 107. ?i komo te?nu?mbapʌ myuspapʌ te?orasyóŋ, [Pcl *and* # Pcl *since* # Dm *the*—Ppl *robber* # Ppl *one-who-it-knows* # Dm *the*—Nn *prayer*,] 108. ñʌ?ithayu te?libru te?yaci?-orasyo?ŋisñe?, [Vb_{tt} *he-him-had-it-for* (= 132 + V^2 *to-have* + 511 + 561) # Dm *the*—Nn *book* # Dm *the*—Nn_r *bad-prayer's* (= N^2 {= At^1 *bad* + N^1 *prayer*} + 611)—Int *its* (= 132 + In),] 109. te?-kotoya ha?n myusi te?r·e?is ?iwʌ?ste? nʌ kyʌnu?mʌyu. [Dm *therefore* (= D + 614) # Aux *does-not* # Vb_t *he-it-to-know* # Dm *the*—Nn_r *king* # Prn_r *who*—Dm *the-fact* # Aux *is* # Vb_t *he-him-robbing* (= 132 + V^3 kʌnu?mʌy- {= 12 + V^1 *to-steal* + 241} + 561).]

110. ?i nʌmu te?r·ey, [Pcl *and* # Vb_i *said-he* # Dm *the*—Nn *king*,] 111. maŋba?s ŋgohtu trampa. [Aux *am-going*—Prn_r *I* # Vb_t *I-it-to-set* (= 131 + koht- *to-put* + 561) # Nn *trap*.] 112. huka minba, teymʌ kunba. [Pcl *if* # Vb_i *comes-he*, # Dm *there* (= D + 619 + 331) # Vb_i *falls-he* (= V^1 kun- *to-fall* + 562).] 113. mero te?bentana?s wyiyu?ŋahkukyʌsi, [Pcl? *exactly* # Dm *the*—Nn_r *window's* # Nn *its-straightness-on* (= 132 + N^3 wiyu?ŋahkuy {= V^2 wiyu?-ŋah- [= At^1 wiyuŋ *straight* + 231] + 311} + 621),] 114. tey kyohtu te?trampa, [Dm *there* (= D + 619) # Vb_t *he-it-set* # Dm *the*—Nn *trap*,] 115. tumʌ tʌ?ŋgučika te?kola ne?kspapʌ. [Num *one* # Nn *metal-kettle* (= N^3 {= N^2 tʌ?ŋguy *metal* [= V^1 tʌ?ŋ- *to-ring* + 311] + N^1 cıka *kettle*}) # Dm *the*—Nn *glue* # Ppl *which-sticks* (= Vb_i ne?kspa *sticks-it* + 411).] 116. ?i nʌmu te?r·ey, [Pcl *and* # Vb_i *said-he* # Dm *the*—Nn *king*,] 117. minba, yʌmʌ tʌhkʌpya, [Vb_i *comes-he*, # Dm *here* (= D + 331) # Vb_i *enters-he*,] 118. ?i maŋba?s nyahka?u. [Pcl *and* # Aux *am-going*—Prn_r *I* # Vb_t *I-him-to-kill* (= 131 + V^2 yahka?- *to-kill* {= 21 + V^1 ka?- *to-die*} + 561).]

119. ?i pihče?kande? nu?mbawʌ?s kyʌ?-aŋwa?ku te?librukʌsi. [Pcl *and* # Atr *then*—Dm *the* # Ppl_r *robber* # Vb_t *he-it-asked* # Dm *the*—Nn *book-on*.] 120. te?libru?s čamhayu ke ?itwa?a trampa. [Dm *the*—Nn_r *book* # Vb_{tt} *it-him-spoke-it-to* # Pcl *that* # Vb_i *existed-it-already* # Nn *trap*.] 121. kyʌ?maŋu te?kyompagre, [Vb_t *he-him-approached* (= 132 + V^2 kʌ?maŋ- {= 12 + V^1 *to-go*} + 561) # Dm *the*—Nn *his-compadre*,] 122. maŋu čamhayu, [Aux *went* # Vb_{tt} *he-him-to-say-it-to*,] 123. ?u?ya myaŋu porke ?itwa?a trampa. [Aux *that-no-longer* (= Au^1 + 721) # Vb_i *you-to-go* (= 133 + V^1 *to-go* + 561) # Pcl *because* # Vb_i *exists-it-already* # Nn *trap*.] 124. ?i komo hene pogre te?kyompagre, [Pcl *and* # Pcl *since* # Atr *very* # Atr *poor* # Dm *the*—Nn *his-compadre*,] 125. nʌmu, ñempeyahka?ʌh, maŋba?ʌh. [Vb_i *said-he*, # Vb_t *although-kill-someone-me* (= 82 + V^2 *to-kill* + *563?*) —Prn *me*, # Vb_i *will-go-I*—Prn *I*.] 126. pero mamisʌh nikoca?mʌyu. [Pcl *but* #

Aux *are-going*—Prn$_r$ *you*—Prn *me* // Vb$_t$ *you*^{0}-*me*^{0}-*to-accuse* (= *131* + V^4 {= 14 + V^2 kocam- *to-announce* [= 11 + V^1 *to-speak*] + 241} + 561).] 127. te?wʌkotoya mehor ?uy mawe. [Ppl *therefore* (= Pp te?wʌ *that* + 614) // Pcl? *better* // Aux *do-not* // Vb$_i$ *go.*] 128. ?i kapričacʌhku wa?y myaŋu. [Pcl *and* // Vb$_i$ *headstrong-did-he* (= V^2 {= Span. loan kapriča- *headstrong* + V^1 *to-do*} + 561) // Aux *that* // Vb$_i$ *he-to-go.*] 129. kyenu?ka kyompagre?s maŋwa?a, [Vb$_t$ *he-it-saw-when-already* (= 132 + V^1 *to-see* + 561 + 712 + 721) // Nn$_r$ *his-compadre* // Vb$_i$ *went-he-already,*] 130. ñʌmhayu te?kyomagre, [Vb$_t$ *he-her-said-to* // Dm *the*—Nn *his-comadre,*] 131. ?ʌs ŋgompagre ha?na maŋu minu. [Prn$_r$ *my* // Nn *my-compadre* // Aux *no-longer* // Aux *to-go* // Vb$_i$ *he*^{0}-*to-come* (= *132* + V^1 *to-come* + 561).] 132. maŋba yahka?yahu. [Aux *are-going* // Vb$_t$ *they*^{0}-*him*^{0}-*to-kill.*] 133. pero maŋba?ʌh ne?kʌ. [Pcl *but* // Vb$_i$ *go-I*—Prn *I* // Prn *myself* (= Pr^2 {= In + 312}).] 134. maŋba?s ŋgenu. [Aux *am-going*—Prn$_r$ *I* // Vb$_t$ *I-him-to-see.*]

135. maŋu ?yukanʌkpo?yʌyu. [Aux *went* // Vb$_t$ *he-him-to-follow* (= 132 + V^4? ?ukanʌkpo?yʌy- *to-follow* {unanalyzed} + 561).] 136. ?i nu?ku te?kyompagre. [Pcl *and* // Vb$_i$ *arrived-he* // Dm *the*—Nn *his-compadre.*] 137. ?es porke trampa?ohmo ?ihtu. [Span. loan *it-is* // Pcl *because* // Nn *trap-in* // Vb$_i$ *is-he.*] 138. pihče?ka ñʌmhayu, [Atr *then* // Vb$_t$ *he-him-said-to,*] 139. kompagre, tiyʌkotoya mis yʌ?šeh ncʌkpa. [Nn *compadre,* // Prn *why* (= Pr^1 *what* + 614) // Prn$_r$ *you* // Dm *thus* (= D + 732) // Vb$_t$ *you-it-do.*] 140. yʌtih komformacʌkʌ. [Atr *now* // Vb$_i$ *conform* (= V^2 {= Span. loan komforma- + V^1 *to-do*} + 563).] 141. ma?ʌs nyahʌkʌ?hayu mis ŋgopak. [Aux *am-going* —Prn$_r$ *I* // Vb$_{tt}$ *I-you-to-remove-it-for* (= 131 + V^2 yahʌkʌ?- *to-remove* {= 21 + V^1 hʌkʌ?- *to-be-removed*} + 511 + 561) // Prn$_r$ *your* // Nn *your-head* (= 131 + N^2 kopak *head* {= 52 + N^1 pak *bone*}).] 142. porke ma minu r·ey. [Pcl *because* // Aux *is-going* // Vb$_i$ *he*^{0}-*to-come* // Nn *king.*] 143. maŋbamih ŋgyʌ?aŋwa?ku. [Aux *is-going*—Prn *you* // Vb$_t$ *he-you-to-ask* (= 133 + V^3 *to-ask-question* + 561).] 144. ?i para ke ?umih ŋgyʌ?-aŋwa?ku, [Pcl *and* // Pcl *for* // Pcl *that* // Aux *that-not*—Prn *you* // Vb$_t$ *he-you-to-ask,*] 145. maŋba?smih nyahka?u. [Aux *am-going*—Prn$_r$ *I*—Prn *you* // Vb$_t$ *I-you-to-kill.*] 146. pihče?ka hyakpʌ?hayu te?kyompagre?s kyopak, kyʌnʌše?ŋ. [Atr *then* // Vb$_{tt}$ *he-him-cut-it-off-completely-for* (= 132 + V^2 hakpʌ?- *to-cut-off-completely* {= V^1 hahk- *to-cut* + 211} + 511 + 561) // Dm *the*—Nn$_r$ *his-compadre's* // Nn *his-head,* // Nn *his-neck-about-as-far-as* (= 132 + N^1 kʌnʌ *neck* + 732 + 822).]

147. ?i cu?kumu, minge?tutih tʸʌhkaŋʌ. [Pcl *and* // Vb$_i$ *left-he,* // Vb$_i$ *came-he-again* // Nn *his-house-at.*] 148. minu čamhayu te?kyomagre, [Aux *came* // Vb$_{tt}$ *he-her-to-speak-it-to* // Dm *the*—Nn *his-comadre,*] 149. ke ka?wa?nde? hyayah. [Pcl *that* // Vb$_i$ *died-he-already*—Dm *the* // Nn *her-husband.*] 150. ?ʌs ncamhayuti?ʌs te?ŋgompagre ke ?uy myaŋu. [Prn$_r$ *I* // Vb$_{tt}$ *I-him-spoke-it-to-just*—Prn$_r$ *I* // Dm *the*—Nn *my-compadre* // Pcl *that* // Aux *that-not* // Vb$_i$ *he-to-go.*] 151. te?kotoyate? homih maŋba ñʌwihtʸahu te?kwerpo. [Dm *therefore* —Dm *the-fact* // Atr *tomorrow* // Aux *are-going* // Vb$_t$ *they-it-to-carry-around* // Dm *the*—Nn *body.*] 152. ?i ?umih nhyʌyu. [Pcl *and* // Aux *that-not*—Prn *you* // Vb$_i$ *you-to-weep.*] 153. ?i minba?smih mbisitacʌhku, [Pcl *and* // Aux *will-come*—Prn$_r$ *I*—Prn *you* // Vb$_t$ *I-you-to-visit,*] 154. te?ande? minu?k te?kwerpo. [Dm *there-already*—Dm *the-fact* // Vb$_i$ *came-it-when* (= V^1 *to-come* + 561 + 712) // Dm *the*—Nn *body.*] 155. porke maŋba ši?ñahu ñe?ŋbahkʌsi te?-kwerpo, [Pcl *because* // Aux *are-going* // Vb$_t$ *they-it-to-tie* // Nn *its-feet-on* // Dm *the*—Nn *body,*] 156. ?i ši?njʌ?yahpa te?-mulahtu?ckʌsi. [Pcl *and* // Vb$_t$ *they-it-will-tie-fast* (= 132 + V^2 si?njʌ?y- *to-tie-fast* {= V^1 si?n- *to-tie* + V^1 cʌ?y- *to-remain*} + 532 + 562) // Dm *the*—Nn *mule-tail-on.*] 157. ma hyopo?u, [Aux *are-going* // Vb$_t$ *they-it-to-drag,*] 158. wa?yt^{y}ih kyeñahu ke

ʔiwʌ hʌpya, [Aux *that-just* (= Au[1] + 741) # Vb$_t$ *they-it-to-see* # Pcl *that* # Prn *who* # Vb$_i$ *weeps-he*,] 159. teʔwʌʔsteʔ fyamilya. [Ppl$_r$ *that-one's* (= Pp *that-one* + 611)—Dm *the-fact* # Nn *his-relative*.]

160. pihčeʔkandeʔ minu tey teʔtʌhkoyh. [Atr *then*—Dm *the-fact* # Vb$_i$ *came-he* # Dm *there* # Dm *the*—Nn *house-at* (= N[1] *house* + 618).] 161. ñʌhayu teʔkyomagre, [Vb$_t$ *he-her-said-to* # Dm *the*—Nn *his-comadre*,] 162. yʌtih ʔʌmʌhkə́ nʌ minu ʔʌs ŋgompagre. [Atr *now* # Dm *there-already* (= D + 331 + 631 + 721) # Aux *is* # Vb$_i$ *he*^{0}-*coming* # Prn$_r$ *my* # Nn *my-compadre*.] 163. mulahtuʔckʌsi nʌ hyopoʔyahu. [Nn *mule-tail-on* # Aux *are* # Vb$_t$ *they-him-dragging*.] 164. yʌʔya nʌ kyʌtʌkyahuʔk, ʔaŋgoʔyh, [Dm *here-already* (= D + 619 + 721) # Aux *are* # Vb$_i$ *they-passing-when* (= 132 + V[1] kʌtʌhk- *to-pass* + 532 + 561 + 712), # Nn *patio-by* (= N[2] ʔaŋgʌʔ *patio* + 618),] 165. maʔsmih nhakciʔu teʔmeloŋ. [Aux *am-going*—Prn$_r$ *I*—Prn *you* # Vb$_{tt}$ *I-you-to-cut-it-for* (= 131 + V[2] hakciʔ- {= V[1] *to-cut* + V[1] *to-give*} + 561) # Dm *the*—Nn *melon*.] 166. ʔi maʔs nʌkhahkʌyu teʔmis ŋgʌʔ. [Pcl *and* # Aux *am-going*—Prn$_r$ *I* # Vb$_t$ *I-it-to-cut* (= 131 + V[3] + 561) # Dm *the*—Prn$_r$ *your* # Nn *your-hand*.] 167. ʔi teʔšeh heke čʌhku. [Pcl *and* # Dm *thus* # Pcl *then* # Vb$_t$ *he-it-did*.] 168. kwando poʔ-miñahu teʔeskolta, [Pcl *when* # Vb$_i$ *came-they* (= V[2] + 532 + 561) # Dm *the*—Nn *guard*,] 169. ñʌhayu, misteʔ nhayah teʔ-nʌmis ŋgohʌyuwʌ. [Vb$_t$ *they-her-said-to*, # Prn$_r$ *your*—Dm *the-fact* # Nn *your-husband* # Dm *the*—Aux *are*—Prn$_r$ *you* # Ppl *one-whom-you-mourning* (= Vb$_t$ *you-him-mourning* + 411).] 170. pihčeʔka teʔ-kyompagre nʌmu ke haʔni. [Atr *then* # Dm *the*—Nn *her-compadre* # Vb$_i$ *said-he* # Pcl *that* # Pcl *no*.] 171. ʔʌsteʔ nhakhayu kyʌʔ. [Prn$_r$ *I*—Dm *the-fact* # Vb$_{tt}$ *I-her-cut-it-for* # Nn *her-hand*.] 172. teʔkotoya nʌ hyʌyu. [Dm *therefore* # Aux *is* # Vb$_i$ *she-weeping*.] 173. kyenhayahu teʔkyʌʔ, hah-kuwʌteʔ, [Vb$_{tt}$ *they-her-saw-it-for* # Dm *the*—Nn *her-hand*, # Ppl *having-been-cut* (= Vb$_i$ hahku *it-got-cut* + 411)—Dm *the-fact*,] 174. čakyahu. [Vb$_t$ *they-her-left*.]

175. pihčeʔka ñʌhayu teʔkyomagre, [Atr *then* # Vb$_t$ *he-her-said-to* # Dm *the*—Nn *his-comadre*,] 176. nʌtiʔsmihteʔ ncamhayu, [Aux *am-just* (= Au[1] + 741)—Prn$_r$ *I*—Prn *you*—Dm *the-fact* # Vb$_{tt}$ *I-you-speaking-it-to*,] 177. huka haʔs nhakha mis teʔ-ŋgʌʔ, [Pcl *if* # Aux *not*—Prn$_r$ *I* # Vb$_{tt}$ *I-you-cut-it-for* (= 131 + V[1] *to-cut* + 511 + *563*?) # Prn$_r$ *your* # Dm *the*—Nn *your-hand*,] 178. nyahkaʔyahpamih. [Vb$_t$ *they-you-kill*—Prn *you*.] 179. pero ʔuy pʌkhay mayaʔkuy. [Pcl *but* # Aux *do-not* # Vb$_{tt}$ *take-it-for-it* (= V[1] *to-get* + 511 + *564*) # Nn *worry* (= V[1] mayaʔ- *to-worry* + 311).] 180. maŋbaʔs ŋgenu nhucʌʔs maŋba ncʌhku. [Aux *am-going*—Prn$_r$ *I* # Vb$_t$ *I-it-to-see* # Atr *how*—Prn$_r$ *I* # Aux *am-going* # Vb$_t$ *I-it-to-do*.] 181. ʔi yʌtih maŋbataʔmʌh ndʌhkaŋʌ. [Pcl *and* # Atr *now* # Vb$_i$ *am-going*?—Prn *I* # Nn *my-house-at*.] 182. ʔumis yahtiyʌ maŋu ncamu, [Aux *that-not*—Prn$_r$ *you* # Prn *nothing* # Aux *to-go* # Vb$_t$ *you-it-to-speak*,] 183. ñʌmhayu teʔ-kyomagre. [Vb$_t$ *he-her-said-to* # Dm *the*—Nn *his-comadre*.]

184. teʔhamatih maŋu yahcʌkʌtʌhu kuraʔs byestido, [Dm *the*—Nn *day-just* (= N[1] *day* + 741) # Aux *went* # Vb$_t$ *he*^{0}-*it*^{0}-*to-have-made* (= *132* + V[2] yahcʌhk- {= 21 + V[1] *to-make*} + 521 + 561) # Nn$_r$ *priest's* # Nn *his-clothing*,] 185. tumʌ dosena. [Num *one* # Nn *dozen*.] 186. ʔi cuʔyanʌmu, ʔalistacʌhku. [Pcl *and* # Vb$_i$ *became-night-it* (= V[3] cuʔyanʌm- {= N[1] *night* + -ya- + 261} + 561), # Vb$_i$ *made-ready-he*.] 187. tumʌ mulaʔs čʌmu teʔpama. [Num *one* # Nn$_r$ *mule* # Vb$_t$ *it-it-carried* # Dm *the*—Nn *clothing*.] 188. ʔi tumʌ mulaʔoyh čʌmu teʔkomiteko. [Pcl *and* # Num *one* # Nn *mule-full* (= N[1] *mule* + 618) # Vb$_t$ *he-it-carried* # Dm *the*—Nn *Comitán-whiskey*.] 189. ʔi ñeʔkʌʔs, teʔlagroʔŋis, yamu pagre-pama. [Pcl *and* # Prn$_r$ *he*, # Dm *the*—Nn$_r$ *robber*, # Vb$_t$ *he*^{0}-*it*^{0}-*wore* # Nn *priest-clothes* (= N[2] {= N[1] *father* + N[1] *clothes*}).] 190. ʔi pyoksu teʔkyopʌn. [Pcl *and* # Vb$_t$

he-it-mounted # Dm *the*—Nn *his-animal.*] 191. maŋu kyʌtʌhku te?nʌ byelacʌkyahumʌy te?kwerpo. [Aux *went* # Vb_i *he-to-pass* # Dm *the*—Aux *are* # Vb_t *they-it-watching-where* (= 132 + V^2 belacʌhk- *to-watch* + 532 + 561 + 711) # Dm *the*—Nn *body.*]

192. pihče?ka kyeñahu te?eskolta?s. [Atr *then* # Vb_t *they-him-saw* # Dm *the*—Nn_r *guard.*] 193. ñʌhayahu, nhuta? nʌ myaŋu. [Vb_t *they-him-said-to,* # Atr where-now (= At^1 *where* + 721) # Aux *are* # Vb_i *you-going.*] 194. nʌ?ʌh maŋu ŋgumgu?yohmo. [Aux *am*—Prn *I* # Vb_i I^0*-going* (= *131* + V^1 *to-go* + 561) # Nn *my-town-in* (= 131 + N^2 kumguy *town* {= V^1 kum- *to-hide* + 311} + 617).] 195. ?i te?barʲi?lohmo tiya?nde? nʌ čʌmu te?kopʌ?nis. [Pcl *and* # Dm *the*—Nn *barrel-in* # Prn *what-now*—Dm *the-fact* # Aux *is* # Vb_t *it-it-carrying* # Dm *the*—Nn_r *animal.*] 196. ha?nha te?coy, nʌmba. [Aux *not*-interrogative # Dm *the*—Nn *liquor,* # Vb_i *says-he.*] 197. sunbatʌs ?inʌk ndo?ŋu. [Aux *want*—Prn_r *we* # Pcl *would* # Vb_t *we-it-to-drink.*] 198. pihče?ka ñʌmhayahu, komiteko ?ʌste? nʌmaŋu. [Atr *then* # Vb_t *he-them-said-to,* # Nn *Comitán-whiskey* # Prn_r *I*—Dm *the-fact* # Vb_t I^0-it^0*-carry.*] 199. pero huka nʌmis sundamu, ma?smih ndo?ŋci?tamu. [Pcl *but* # Pcl *if* # Aux *are*—Prn_r *you* # Vb_t *you*^{0}-it^0*-wanting,* # Aux *am-going*—Prn_r *I*—Prn *you* # Vb_{tt} *I-you-to-give-to-drink-it* (= 131 + V^2 to?ŋci?- {= V^1 to?ŋ- *to-drink* + V^1 *to-give*} + 531 + 561).] 200. pihče?ka ñʌputhayahu. [Atr *then* # Vb_{tt} *he-them-took-it-out-for* (= 132 + V^3 *to-take-out* + 511 + 532 + 561).] 201. tʲo?ŋci?yatʌhu te?soldado. [Vb_{tt} *he-them-gave-to-drink-it* (= 132 + V^2 *to-give-to-drink* + 522 + 561) # Dm *the*—Nn *soldiers.*] 202. ?i masa nʌ ño?tʲahu?k, [Pcl *and* # Atr *more-already* (= At^1 mas *more* + 721) # Aux *are* # Vb_i *they-getting-drunk-when* (= 131 + V^1 no?t- *to-get-drunk* + 532 + 561 + 712),] 203. kyumwanahku te?barʲil te?ladro?ŋis. [Vb_t *he-it-stealthily-lowered* (= 132 + V^2 kumwanahk- {= V^1 kum- *to-hide* + V^1 *to-go-down*} + 561) # Dm *the*—Nn *barrel* # Dm *the*—Nn_r *robber.*] 204. mas či?yatʌhu te?trago wa?ytʲih mas ño?tʲahu. [Atr *more* # Vb_{tt} *he-them-gave-it* (= 132 + V^1 *to-give* + 522 + 561) # Dm *the*—Nn *liquor* # Aux *that-just* # Atr *more* # Vb_i *they-to-get-drunk.*] 205. no?tkunbʌ?yahu te?-soldado, [Vb_i *drunk-fell-all-they* (= V^3 no?-tkunbʌ?- *to-fall-drunk-completely* {= V^1 *to-get-drunk* + V^1 kun- *to-fall* + 211} + 532 + 561) # Dm *the*—Nn *soldiers.*] 206. ?ʌŋbakpʌ?yahu tey, ?i hyambʌ?yahu te?-kwerpo. [Vb_i *sleep-lay-all-they* (= V^3 ?ʌŋbakpʌ?- {= V^1 ?ʌŋ- *to-sleep* + V^1 pahk- *to-lay*? + 211} + 532 + 561) # Dm *there,* # Pcl *and* # Vb_t *they-it-forgot* (= 132 + V^2 hambʌ?- *to-forget* {= V^1 ham- *to-remember* + 211} + 532 + 561) # Dm *the*—Nn *body.*] 207. pihče?kande? yahwanahku kopʌngʌsi te?pagrepama. [Atr *then*—Dm *the-fact* # Vb_t he^0-it^0*-lowered* # Nn *animal-on* # Dm *the*—Nn *priest-clothing.*] 208. yahyamyatʌhu te?soldado. [Vb_{tt} he^0- $them^0$-*caused-to-wear-it* # Dm *the*—Nn *soldiers.*] 209. ?i komo lagroŋde?, [Pcl *and* # Pcl *since* # Nn *robber*—Dm *the-fact,*] 210. pyʌhku te?kyompagre, [Vb_t *he-him-took* # Dm *the*—Nn *his-compadre,*] 211. kyohtu te?mulahkʌsi, [Vb_t *he-him-put* # Dm *the*—Nn *mule-on,*] 212. ñʌcu?kumu, maŋu ñihpu. [Vb_t *he-him-took-away,* # Aux *went* # Vb_t *he-him-to-bury.*]

213. ho?pit taŋbʌ?nʌmu. [Atr *next-day* # Vb_i *dawned-it.*] 214. minu ša?yahu te?-soldado, [Aux *came* # Vb_i *they-to-wake* # Dm *the*—Nn *soldiers,*] 215. cu?kumyahu [Vb_i *left-they.*] 216. maŋyahu te?rʲe?is tʲ-ʌhkaŋʌ. [Vb_i *went-they* # Dm *the*—Nn_r *king's* # Nn *his-house-at.*] 217. pihče?ka minu kyenu te?rʲe?is ?yune?s. [Atr *then* # Aux *came* # Vb_t *she-it-to-see* # Dm *the*—Nn_r *king's* # Nn_r *his-child.*] 218. tatay, tiya?ʌ? čʌkyahu tropa?s. [Nn *father* (= N^1 tatah *father* + 661), # Prn *what-now*—Dm *that-fact* (= D ?ʌ? *that*) # Vb_t *they-it-did* # Nn_r *troops.*] 219. ?ʌmʌhkande? nʌ miñahu, pagrepama yamyahu. [Dm *from-there-already*—Dm *the-fact* # Aux *are* # Vb_i *they*^{0}*-coming,* # Nn *priest-clothing* # Vb_t *they*^{0}-it^0*-wear.*] 220. pihče?ka nʌmu

te?r·ey, [Atr *then* # Vb_i *said-he* # Dm *the* —Nn *king*,] 221. ?i tiya? ?ʌh cʌkhayu ?ʌ?bweŋladro?ŋis. [Pcl *and* # Prn *what-now* # Prn *me* Vb_{tt} *did-it-he-to-me* (= V^1 *to-do* + 511 + 561) # Dm *that*—Nn_r *good-robber*.] 222. pihče?ka miñahu tey te?soldado, [Atr *then* # Vb_i *came-they* # Dm *there* # Dm *the*—Nn *soldiers*,] 223. hʌyahpa. [Vb_i *weep-they*.] 224. porke ha?na musi čamyahu tiyʌte? čʌkhayatʌhu. [Pcl *because* # Aux *no-longer* # Aux *to-be-able* (= Au^2 {= V^1 *to-know* + 564}) # Vb_t *they-it-to-speak* # Prn *what*—Dm *the-fact* # Vb_{tt} *someone-them-did-it-to*.] 225. te?bweŋladróŋ sikpa t^y-ʌhkaŋʌ. [Dm *the*—Nn *good-robber* # Vb_i *laughs-he* # Nn *his-house-at*.] 226. ?i te?r·ey ki?ška?pa. [Pcl *and* # Dm *the*—Nn *king* # Vb_i *is-angry-he*.] 227. nuŋka hamyusʌ ?iwʌ?ste? ñʌpoyu te?kwerpo. [Pcl *never* # Vb_t *not-he⁰-it⁰-knew* (= 121 + 132 + V^1 *to-know* + 563) # Prn_r *who*—Dm *the-fact* # Vb_t *he-it-ran-away-with* # Dm *the*—Nn *body*.]

15.2. Free translation of text.

1. There was a rich man. 2. And he was a robber. 3. He said to his compadre, 4. "You see much suffering. 5. I am going to lend you my book, 6. in order that you may see how I work. 7. For it is a fact that I am getting rich. 8. And when you have seen it, 9. you are to come and leave it at my house. 10. If you do not come yourself, 11. I shall come to get the book at your house."

12. Then he saw that his compadre did not come to leave the book. 13. Then he went to get it. 14. He said to him, "Do you know the story?" 15. His compadre said, 16. "I already know some pretty ones. 17. There are animals in the book." 18. "It is not that which I speak of," 19. he said to his compadre. 20. "I want you to learn the prayers, 21. so that in that way you may get rich." 22. His compadre said, 23. "But I don't know letters."

24. Then his compadre said to him, 25. "Give me the book. 26. And get ready tomorrow. 27. I am going to take you. 28. Tell my comadre not to say anything. 29. Because people are going to know it. 30. If the people ask, 31. have her say, 32. 'They went on a trip,' 33. while we return." 34. Then his compadre said to him, 35. "There now, come get the pack animals, 36. that we may take them."

37. Then they went. 38. When they were already on the way, he said to his compadre, the rich one, 39. "You are getting very rich, compadre. 40. Where then are you going to get the money?" 41. he said to his compadre. 42. Then he said to him, 43. "Don't say anything. 44. Until you see it, 45. then I will tell you."

46. They journeyed one night. 47. They arrived at the king's house. 48. And at the back of the king's house was a window. 49. Then the rich man threw a rope up on the window. 50. Then he said to his compadre, 51. "I am going to go up, 52. that I may go and get out the money. 53. And you will wait for me here. 54. And you are not to let the load of money make a noise." 55. "It doesn't matter," 56. said his compadre.

57. Then his compadre went up. 58. He left his compadre under orders. 59. He went and took out the load of money. 60. It was a fact that he went and stole taking his compadre along, 61. because his compadre was very poor. 62. Then he lowered the money. 63. They loaded the two pack animals. 64. Since he pitied his compadre, 65. he gave him one animal-load of the money. 66. They set out and went home. 67. He left his compadre and his comadre under orders, 68. and he himself went to his house. 69. He took the animals back again.

70. Next day it dawned. 71. He went to visit his compadre. 72. Then he said to his compadre, 73. "The money which I gave you, 74. you are not to go tell where you got it. 75. Put the money to use. 76. I shall come and speak to you again in eight days. 77. If you know how, 78. put the money to use. 79. Just by that you will get rich."

80. The eight days were completed; 81. he went again, 82. to see if his compadre was putting the money to use. 83. Then he said

to him, 84. "Do you still have the money?" 85. His compadre said, 86. "I no longer have it." 87. "And what then is it doing for (?) you," he said to him. 88. "It has already run out."

89. "Then don't say anything. 90. I will take you yet again. 91. Let's go. 92. We are going to try it again. 93. It may be that you will get rich. 94. Let us go tomorrow, 95. that we may arrive at night."

96. They went. 97. They arrived there, 98. where they went to get the money. 99. His compadre, the robber, went up again. 100. Very quickly he went and took out the money. 101. Then they again loaded the animals, and left.

102. It dawned; 103. they had already arrived back home. 104. Then the king said, 105. "I am going to find out, 106. who it is that is arriving to steal the money. 107. And since the robber was one who knew the prayers, 108. he had the book of bad prayers, 109. therefore the king did not know who it was that was robbing him.

110. And the king said, 111. "I am going to set a trap. 112. If he comes, he will fall into it." 113. Right in front of the window, 114. there he set the trap, 115. a large kettle of sticky glue. 116. And the king said, 117. "He will come and get in this, 118. and I am going to kill him."

119. And then the robber inquired of his book. 120. The book told him that there was now a trap. 121. He went to his compadre, 122. and told him, 123. "Don't go any more, because there is now a trap." 124. And since his compadre was very poor, 125. he said, "Even if I get killed, I will go." 126. "But you are going to accuse me. 127. Because of that, better not go." 128. And he went ahead anyhow. 129. When his compadre saw that he had gone, 130. he said to his comadre, 131. "My compadre is not going to come back. 132. They are going to kill him. 133. But I am going myself; 134. I am going to see him."

135. He went and followed him. 136. And his compadre arrived. 137. It is because he was in the trap. 138. Then he said to him, 139. "Compadre, why are you doing thus? 140. Now reconcile yourself to the situation. 141. I am going to take off your head for you. 142. Because the king is going to come. 143. He is going to question you. 144. And so that he may not question you, 145. I am going to kill you." 146. Then he cut off his compadre's head completely, about as far as his neck.

147. And he left, and came again to his house. 148. He came and told his comadre, 149. that her husband was dead. 150. "I told my compadre that he should not go. 151. Therefore tomorrow they are going to take the body around. 152. And you are not to weep. 153. And I shall come and visit you, 154. when the body comes. 155. For they are going to tie the body by its feet, 156. and they will tie it fast to a mule's tail. 157. They are going to drag it, 158. just to see that whoever weeps, 159. that one is his relative."

160. Then it took place that he came to the house. 161. He said to his comadre, 162. "Now yonder is coming my compadre. 163. They are dragging him from a mule's tail. 164. When they are passing here, by the patio, 165. I am going to cut a melon to give to you. 166. And I am going to cut your hand." 167. And so he did. 168. When the guard came, 169. they said to her, "It is your husband for whom you are weeping." 170. Then her compadre said, "No; 171. it is that I cut her hand for her. 172. Therefore she is crying." 173. They saw her hand, that it was cut; 174. they left her.

175. Then he said to his comadre, 176. "I am just telling you, 177. if I had not cut your hand for you, 178. they would have killed you. 179. But don't worry. 180. I am going to see how I am going to do. 181. And now I am going home. 182. You are not to say anything," 183. he told his comadre.

184. The same day he went and had priest's clothing made, 185. one dozen. 186. And it became night, and he made ready. 187. One mule carried the clothing. 188. And on one mule he carried Comitán whiskey.

189. And he, the robber, wore priest's clothing, 190. and mounted his animal. 191. He went past where they were watching over the body.

192. Then the guard saw him. 193. They said to him, "Where are you going?" 194. "I am going to my town." 195. "And in the barrel, what is it that the animal is carrying? 196. Isn't it liquor," he said. 197. "We would like to drink it." 198. Then he said to them, "It is Comitán whiskey that I am carrying. 199. But if you want some, I am going to give you some to drink." 200. Then he got it out for them. 201. He gave it to the soldiers to drink. 202. And as they were getting more drunk, 203. the robber unobtrusively lowered the barrel. 204. He gave them more liquor just so that they would get more drunk. 205. The soldiers all fell dead drunk; 206. they lay down to sleep there, and forgot the body. 207. Then he lowered the priest's clothing from the pack animal. 208. He put it on the soldiers. 209. And since he was a robber, 209. he took his compadre, 210. put him on the mule, 211. took him away, and went and buried him.

213. Next day it dawned. 214. The soldiers woke up, 215. and left. 216. They went to the king's house. 217. Then the king's daughter came and saw it. 218. "Father, what now is it that is the matter with the troops? 219. Yonder they are coming, wearing priest's garments." 220. Then the king said, 221. "Now what has that good robber done to me?" 222. Then the soldiers came; 223. they were weeping. 224. For they could not tell what it was that had been done to them. 225. The good robber was laughing in his house, 226. and the king was angry. 227. He never knew who it was that had run away with the body.

DIALECT DISTANCE TESTING IN ALGONQUIAN[1]

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0. Introduction
1. Equipment
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0. Voegelin and Harris in a recent paper[2] outlined a new method for determining intelligibility among dialects of natural languages. In the fall of 1950 Turner and the Hickersons applied this method to the Iroquoian family.[3] This paper treats the author's application of the method to Shawnee, Kickapoo, Ojibwa, and Sauk-and-Fox[4] (hereafter referred to as SF) of the Central group of the Algonquian family. Field trips[5] to these speech communities are summarized in Table I. Material to be used in testing dialect distances were gathered on Trips 1–4; on Trips 5–8 these tests were administered.

The purpose of this investigation was twofold; a) to attempt to perfect a method of establishing objective measures of the distance between speech communities, and b) to obtain measures of the degree of linguistic relationships among the Shawnee, Kickapoo, Ojibwa, and SF speech comumnities. The method was to take recorded continuous text from one speech community, play it to members of another speech community, and attempt to estimate the percentage of information which was transferred from the first community to the second.

1. The equipment used consisted of a wire recorder and a tape recorder together with necessary wires, tapes, and two microphones, a foot pedal for controlling the wire recorder, and a mixer control for adjusting independently the recording level of each microphone.

In gathering materials on Trips 1–4 one microphone was attached to the wire recorder through the mixer control; this microphone was given to the informant. To obtain translations of recorded narrative materials, two microphones were attached to the tape recorder through the mixer control. One was placed in front of the speaker of the wire recorder—to pick up the play-back of the recorded narrative—and the other was given to the informant—to pick up his translation. By starting and stopping the wire recorder—while the tape recorder ran continuously—the investigator was able to record on tape a stretch of speech from the wire recorder followed by the informant's translation.

On Trips 5–8 testing materials were played

[1] Condensation of a thesis submitted to the faculty of the Graduate School in partial fulfillment of the requirements for the Degree of Master of Arts, in the Department of Anthropology, Indiana University.

[2] C. F. Voegelin and Zellig S. Harris, Methods for Determining Intelligibility Among Dialects of Natural Languages, APS-P 95.322-29 (1951).

[3] Harold Hickerson, Glen D. Turner, and Nancy P. Hickerson, Testing Procedures for Estimating Transfer of Information Among Iroquois Dialects and Languages, IJAL 18.1-8 (1952). The Voegelin-Harris paper was available to these investigators in manuscript form.

[4] The speakers refer to themselves and the language as Sauk-and-Fox. This is presumably a single dialect resulting from the levelling of the Sauk and Fox dialects.

[5] Funds provided by the American Philosophical Society and Indiana University and are hereby gratefully acknowledged.

over the wire recorder and these together with the informant's responses were secured just as on Trips 1–4. With the exception of Trip 5, which was to Michigan, the equipment for testing was set up permanently in Shawnee, Oklahoma. This arrangement eliminated difficulties encountered in moving the equipment and proved time-saving.

2.1. On Trips 1–4 each speech community was represented by one informant. On Trips 5–8 each community, except Ojibwa,[6] was represented by six informants.[7] All informants were selected by the ASK THE INFORMANT[8] technique, and all stated that they understood no Indian language except their own.

TABLE I

Trip	Date	Location	Speech Community
1	June 10, 1951	Norman, Okla.	Shawnee
2	June 11, 1951	Shawnee, Okla.	Kickapoo
3	July 8, 1951	Mt. Pleasant, Mich.	Ojibwa
4	Aug. 27, 1951	Shawnee, Okla.	SF
5	July 22, 1951	Mt. Pleasant, Mich.	Ojibwa
6	Aug. 24, to Sept. 1, 1951	Shawnee, Okla.	Kickapoo
7	Aug. 24, to Sept. 1, 1951	Shawnee, Okla.	Shawnee
8	Sept. 3, to Sept. 9, 1951	Shawnee, Okla.	SF

The cultural environment surrounding each of these speech communities is quite different. The Shawnee in general live on their allotments, which are scattered among those of white farmers. Most of the group are bilingual, but only Shawnee is spoken on many ceremonial occasions; as a result, all Shawnee met by this investigator seemed to be able to speak the language fluently. The Kickapoo either live in a small village of rectangular reed houses (summer houses) or interspersed among the whites. Only Kickapoo is spoken in this group except when communicating with whites. This conclusion was reached after observing these people for about three weeks. The Ojibwa were in Michigan, where they live on a large tract of land inhabited exclusively by members of the group. Everyone encountered was bilingual; however, Ojibwa is spoken generally by all of the older people, while the younger ones use English predominantly. The SF are the most divergent of the groups. They are acculturated to the point that the now deceased principle chief, Don Whissler, stated that there were no SF speakers under thirty years of age, and many of the middle-aged people speak and understand only partially. As a general rule English is used even in conversations among good speakers of SF.

2.2. Each informant on Trips 1–4 was asked to tell a nonfolkloristic, spontaneous narrative in his native language. This narrative was then played back to the informant from the wire recorder in stretches of speech, not exceeding eight seconds[9] in length, bounded where possible by natural pauses. After each stretch the informant was asked to give a free English translation. During this step the tape recorder ran continuously, thus obtaining a short phrase of

[6] Ojibwa was included to check the results obtained when a speech community consistently classified as belonging to a separate language was tested.

[7] Two SF informants were ruled out. Other informants stated that Bill Niwashi did not speak SF, and Mr. Walker was partially deaf.

[8] Voegelin and Harris (1951).

[9] This time span was chosen as a maximum because Turner and Hickerson stated that some of their informants had difficulty retaining all the material in streams of speech longer than eight seconds.

the narrative followed immediately by a translation thereof.

2.2.1. The Kickapoo informant interviewed on Trip 2 was John Mohawk, a Mexican Kickapoo residing temporarily in Kickapoo Village, Oklahoma. Following is a sample of his phrase-by-phrase informant translations.

There was three of us went hunting in the Mountains.—We came over there, where we going.—We sleep over there.—We spend three days to get there.—Next we was hunting all day, we didn't get any game that, all day. —Then that evening I killed one deer, and I take half of it.—I couldn't take all of it, I took half of it.—We stayed ten days down there, then we came home.—We spend one day and almost came home.—We started in the next morning and came home, about noon. —We had almost trouble down there, at the way.—There was some white peoples down there that wouldn't let us by.—It's all right, we didn't have no trouble that time.—We killed three deers that time.—Then we came home, and started Church.—We pray for our Indians.

2.3. Tests were constructed by extracting one and one-half minute stretches of speech from the continuous narratives obtained under **2.2** and further dividing these stretches into smaller ones of from three to eight seconds in length, bounded where possible by natural pauses. To obtain tests that were uniform and not distorted by starting and stopping the wire recorder, these steps were followed:

(a) From each narrative obtained under **2.2** a one and one-half minute stream of speech was selected and transferred to tape by placing the microphone—which was attached to the tape recorder—in front of the speaker of the wire recorder, while the narrative was played back on the wire recorder. The tape recorder was so constructed as to permit starting and stopping without slurring.

(b) With the wire recorder recording continuously, and the microphone in front of the speaker of the tape recorder, the one and one-half minute stretches put on in (a) were played in portions of from three to eight seconds, punctuated by pauses of about four seconds.

Thus each test consisted of from 15 to 19 portions of speech recorded on wire and separated by pauses. By starting and stopping within these pauses when administering the tests, manipulatory distortion was eliminated.

2.4. The tests were administered in the investigator's apartment by playing three to eight second portions on the wire recorder of a language not identified for the informant. Before the test each informant was told to translate into English as much of each portion as he could, even if he understood only a word or the general topic under discussion. Nothing was said to the informant during the test, except that he investigator expressed his willingness to repeat any portion. Tests 1, 2, 3, and 4, Shawnee, Kickapoo, Ojibwa, and SF respectively, were always administered in that order.

2.4.1. The following are phrase-by-phrase informant translations of test number two as given by Mrs. X, an elderly Shawnee, John Mohawk, a Kickapoo, Tom McClellan, a SF, and Mr. Elk, an Ojibwa.

Mrs. X: *That's Sauk-and-Fox language.—No.—No.—I don't know what he said.—No.—They eated enough breakfast.—No.—No.—He said somebody told him to go and hunt deer.—They come back next day.—They killed one.—No.—They got home at their house.—They went to sleep at home.—No.—No.—No.—No.*

John Mohawk: *There was three of us went hunting in the mountains.—We came over there where we going.—We sleep over there.—We spend three days to get there —Next day, —we went hunting.—We take four days looking for some deer,—in the evening I killed one deer.—I don't take the deer, I only take half of it.*—This phrase failed to record, and in the analysis it was scored as all

correct—*We had good luck.—We spend ten days to come back.—We take whole day to get where we, our house.—This time when we get home.—Next day, we went down around there, where our homes.—This time we was hunting around there, we had good luck.—Someplace down there we had a little trouble.—They didn't let us go by close to their homes.*

Tom McClellan: *Everybody was walking around in the mountains.—We went somewhere.—We slept there.—We were passing by.—Next day,—we went hunting.—We walked around all day, without anything to eat.—That evening, I killed one buck,—I couldn't take it all, I just took half of it.—While we was walking around,—we had a good walk.—On we went till we saw some more deer,—We was gone, travelling, ten days.—As we go on we got there that evening.—We went to bed and went to sleep.—At one place, we got stranded.—Some white people there.—We kept on going the way we was going.*

Mr. Elk: The informant responded to every phrase in this test with either, *Can't understand it,—Don't understand it,* or *Don't understand.*

2.5. For the analysis a STANDARD GRADING TRANSLATION was prepared by the investigator from the original narrator's informant translation (sec. **2.4**) and two of the most complete informant translations offered by other members of the same speech community. These standard grading translations were arbitrarily divided into units. To illustrate this, consider the following three sentences: *They used to get me up early, They wake me up,* and *They wake me up early in the morning.* The actor of each of these three sentences is *they.* The verb is not as easily separable, but a common denominator of *used to get me up, wake me up,* and *wake me up* is *awaken me,* which also yields the goal *me.* The common denominator of *early in the morning, early,* and nothing, is *early.* The standard grading translation then is; 1) They 2) awaken 3) me 4) early. These units were scored as being right, wrong, or occasionally half right for each informant. Thus the scores for the above sentences would be 4, 3, and 4 respectively. Each informant's translation was checked against the standard grading translation of the corresponding test and given a percentage score (Z). An ADJUSTED PERCENTAGE OF INFORMATION TRANSFER (Y) was obtained by dividing the above percentage by the percentage the informant scored for his native language (X). The computation stated as a formula is $Y = \frac{Z}{X}$.

The adjusted percentage of information transfer was computed in order to have comparable data. In view of the fact that all informants used in this type of investigation must be bilingual, it is quite possible that they are not equally proficient in English (the intermediary language). This would lower the percentage scores both in their native speech and in any related language. If all of the SF speakers spoke English well, and all Kickapoo speakers spoke English poorly, the percentages of information transfer for all Kickapoo informants (as measured by the testing procedure) would be considerably lower than those of the SF informants. However, if English were the only uncontrolled variable, it would be constant for both languages for any given informant, that is, the ratio: PERCENTAGE OF INFORMATION TRANSFER OF A RELATED LANGUAGE divided by the PERCENTAGE OF INFORMATION TRANSFER OF THE NATIVE LANGUAGE would not be affected by the informant's comprehension of English. The above formula $Y = \frac{Z}{X}$ means simply, that if the informant translated 100% of his native speech he would be able to translate Y% of a closely related language.

The same argument holds for a group of informants who are bilingual, but do not use their native language as the normal medium of communication; as a result the

percentage of information transfer would be low. Let A equal the percentage of English that a given informant can understand, and further let B equal the percentage of his native language that he can understand—it makes no difference whether the actual percentages are known or unknown—then this implies that the percentage score for any informant would be the product ABZ for a closely related language, and the product ABX for his native speech, thus the above formula becomes $Y = \frac{ABZ}{ABX}$, but by cancelling the constants the equation again becomes $Y = \frac{Z}{X}$, Therefore the constants have no effect on the results of the adjusted scores, but could radically alter the raw score, because it would be equal to the product ABZ. It is easy to see that the product ABZ could be considerably below the actual percentage of intelligibility between fluent speakers of the two speech communities.

A residual is the average variation from the mean of a number of measurements. In Table III (sec. **3**) each adjusted percentage of information transfer occurs with the notation ± followed by the residual for each group. This indicates the relative precision of each figure.

The average adjusted percentage of information transfer for all informants of any speech community was added to the average for any other speech community. Dividing by two yielded the PERCENTAGE OF MUTUAL INTELLIGIBILITY for those two groups.

The following example, using Test 4 as translated by John Mohawk shows how a percentage of mutual intelligibility is computed. The number of units translated correctly, viz. 33, is divided by the total number of units in the Test, viz. 50, yielding 66%. Since he scored only 85% on his native language, Kickapoo, dividing the 66% he scored on SF by 85% gives 78%, the adjusted percentage of information transfer.

The average adjusted percentage of information transfer that Kickapoo informants scored on SF was 76%; the average that SF informants scored on Kickapoo was 82%. To compute the percentage of mutual intelligibility, for SF and Kickapoo, 76% and 82% were added and the sum, 158% was divided by 2, giving 79%.

2.5.1. The standard grading translation for Kickapoo was divided into the following units: 1) Three of us 2) went hunting 3) in the mountains. 4) When 5) we 6) got there, 7) we 8) sleep. 9) We 10) travelled 11) three days, 12) Next morning 13) we 14) went 15) hunting. 16) We 17) walked 18) all day, 19) three of us 20) in the evening 21) I 22) killed a deer. 23) I 24) couldn't take 25) all of it, 26) so I 27) took only half 28) of it. 29) Then while 30) we 31) was there, 32) we 33) had a good trip. 34) There was 35) deer tracks 36) all around. 37) We 38) were gone 39) for ten days, 40) then we 41) started back. 42) After travelling 43) one day, 44) we 45) almost got there, 46) where 47) we 48) started from, 49) our home. 50) Then 51) they 52) went to sleep, 53) and the next day 54) about noon, 55) they got there. 56) At one place 57) something 58) almost happened 59) to us. 60) There were 61) white people 62) there. 63) They forbid 64) us 65) to pass, 66) but 67) we 68) went on anyway.

3. The results of the investigation are tabulated as follows:

Let X represent the Percentage of Information Transfer (sec. **2.5**) for any given informant for his own speech, and let Y represent the ADJUSTED percentage of Information Transfer for any given test for the same informant; then Table II can be used in conjunction with the formula XY = Z to compute his percentage of Information Transfer for that test. Taking Mrs. X as an example, X equals 98%, and Y equals 15% for test number 2. Substituting in the formula (98%) (15%) = Z, then Z equals 14.7% or for all practical purposes still 15%. The above formula is

easily derived from the formula originally used to compute the Adjusted Percentage of Information Transfer, i.e. $Y = \frac{Z}{X}$ (sec. **2.5**). The above information concerning the formula is included here for the convenience of any reader interested in the UNADJUSTED Percentage of Information Transfer; these do not appear in this paper.

TABLE II. *Adjusted Percentages of Information Transfer*

	Informants	Tests			
		S	K	O	SF
	Shawnee				
1	Mrs. X	98%	15%	00%	26%
2	Herman Littlecreek	85%	00%	00%	00%
3	Bill Johnson	89%	00%	00%	00%
4	Mr. Littlecharlie	91%	05%	00%	00%
5	Mrs. Littlecreek	92%	19%	00%	00%
6	Mr. Littlecreek	80%	30%	00%	00%
	Kickapoo				
1	John Mohawk	00%	85%	00%	78%
2	David Frye	00%	100%	00%	78%
3	Richard Ketashawnoff	00%	54%	00%	86%
4	Thurman Wapakitchi	00%	83%	00%	72%
5	Jimmey Stevens	00%	87%	00%	70%
6	George Whitewater	00%	90%	05%	73%
	Ojibwa				
1	Mr. Elk	00%	00%	100%	00%
	SF				
1	Fred Grant	00%	88%	00%	90%
2	Tom McClellan	02%	83%	00%	78%
3	Mrs. Ellis	01%	77%	00%	86%
4	Carry Mason	00%	80%	00%	70%

With the scores tabulated it is easy to see the relative distances between speech communities, but the problem of just where to set the point at which dialects become separate languages is a very difficult one. In view of the flexibility of the method it was deemed advisable to say that Shawnee, Kickapoo, and SF are members of a closely related group of speech communities, while Ojibwa is not a member of this group. Kickapoo and SF are very closely related, 79% mutual intelligibility, while Shawnee is a divergent member of the group, only 02% to 06% mutual intelligibility. The significance of this investigation lies in the method for measuring the distances between the speech communities; using the above outlined method it can be demonstrated that speech communities A and B of group S are more closely related to each other than are speech communities C and D of group R. Whether one calls them languages or dialects is not relevant. The results in Table IV agree with earlier alignments.[10]

TABLE III. *Average Adjusted Percentages of Information Transfer*

Speech Community	Tests			
	S	K	O	SF
Shawnee	89 ± 4%	12 ± 10%	00%	04 ± 7%
Kickapoo	00%	83 ± 10%	01%	76 ± 4%
Ojibwa	00%	00%	100%	00%
Sauk-and-Fox	00%	82 ± 4%	00%	81 ± 6%

TABLE IV. *Percentages of Mutual Intelligibility*

	Shawnee	Ojibwa	Sauk-and-Fox
Shawnee	—	00%	02%
Kickapoo	06%	00%	79%
Sauk-and-Fox	02%	00%	—

4. Since it is always desirable to know whether or not empirical data fit a theoretical model, the decision was made to attempt to create a function $f(x) = y$, that would fit the data obtained in this investigation. Data are not available for the conclusive demonstration of such a function. However, the method to be used in such an investigation is illustrated below.

It is assumed that the understanding of a closely related speech community is a function of the understanding of one's native speech. Therefore a graph was constructed with the percentage score (sec.

[10] Leonard Bloomfield, Algonquin, Linguistic Structures of Native America, VFPA 6.85 (1946).

2.5) of a given informant for his native speech, in this case Kickapoo, plotted along the x axis, and his percentage score for a closely related speech community (SF) plotted along the y axis. Table V below contains the names of the Kickapoo informants and their percentage scores for Kickapoo and SF.

The dispersion of the plotted points was inspected and an attempt made to fit a linear equation to these points. The generalized formula for a linear equation is $y = ax + b$; a and b are constants. These constants were computed from the above data, using the method of least squares.[11] This method consists essentially of computing constants for an equation such that

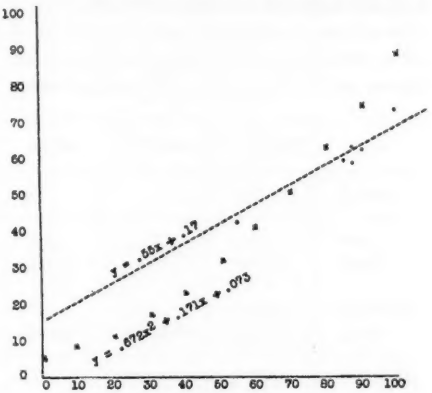
TABLE V. *Percentages of Information Transfer*

Native Kickapoo Informants	Kickapoo	SF
John Mohawk	85%	66%
David Frye	100%	78%
Richard Ketashawnoff	54%	46%
Thurman Wapakitchi	83%	60%
Jimmey Stevens	87%	61%
George Whitewater	90%	66%

the sum of the squares of the distances from points (s_i, y_i') to points on the curve (x_i, y_i) will be a minimum. The constants a and b resulting from the above computations are a = .55 and b = .17, resulting in the equation y = .55x + .17. This curve fits the plotted points, but by extrapolation leads to an absurd result. Even if a speaker understood none of his native speech, Kickapoo (i.e. x = 0) he would be expected to understand 17% of a closely related speech community, in this case SF. However, this may be the result of the size of the sample.

A second attempt was made using a polynomial of the form $y = ax^2 + bx + c$. Again using the method of least squares, the constants for the preceding equation were computed. This equation appeared not to fit the plotted points as well as the above linear equation, but the figure of 17% was reduced to 07%. Neither equation was completely satisfactory. However, when more materials are available it will be possible to test several equations of the form $y = a_1x^n + a_2x^{n-1} + \cdots + a_nx + a_{n+1}$, which is a generalized polynomial of the n'th degree. If these prove unsatisfactory, an exponential equation may yield the desired results.

It is probable that with a larger sample the form of the equation may be determined by inspection. Then several equations for



GRAPH I. Intelligibility Curves

different pairs of speech communities may be computed and compared to determine a general formula.

5. In a recent paper Lado discussed several tests designed to measure the comprehension of English by foreign students prior to their departure for the United States.[12] Lado concludes that the available tests left unsolved the following problems: (1) what constitutes an understanding of English; (2) what effect the student's linguistic background has on his score; (3) how to eliminate the use of recording equipment, since this equipment was fre-

[11] Paul G. Hoel, Introduction to Mathematical Statistics, pp. 80-81 and 89-90. (New York, 1947)

[12] Robert Lado, Survey of Tests in English as a Foreign Language, Language Learning III no. 1-2.51-66 (1950).

quently not available. The problem of testing a non-native speaker's ability to understand English appears to have points in common with testing intelligibility between dialects or languages.

A persistent difficulty in the conventional language testing situation—whether of the A type or B type[13]—is that the tester attempts to test a great variety of things (pronunciation as in recognizing rhymes, reading, specialized vocabularies such as the scientific, conversational or straight narrative or literary genre, grammatical structure, logical reasoning and something that is called 'nonverbal reasoning') which may or may not be really integrated in the final average of all, in the quantified score. If we were to apply dialect distance techniques to language learning, we should test one factor at a time—to begin with, the transfer of information from the second language to the native language of the student.

[13] Grateful acknowledgment is made to unpublished information obtained in personal communication from anthropologists, linguists and psychologists at Indiana University who are concerned with Armed Forces contract research on comprehension tests of foreign languages (type A) and of English for foreigners (type B).

NOTES ON PENUTIAN[1]

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1. Table of correspondences for two Proto-Penutian phonemes
2. Contraction in Miwok
3. Tolichi dialect of Yokuts
4. Morphology
5. The numeral systems and the name 'Penutian'

1. The Monterey tš appears to have been used to transcribe two primitively different phonemes, given below in Series I and Series II.

In the first series the consonant is medial, and in the second usually initial; but enough occurrences in the medial position are found in the second series to show that the first is not a positional shift.

Since Costanoan is extinct we must tolerate the often inconsistent recording. I believe it is quite clear that in the above table the y (i) of the first series in the dialects from Santa Cruz to San Francisco contrasts with the consonants found in those dialects in the second series. The consonant of the second

Monterey	San Juan Bautista	Santa Cruz	Santa Clara	San José	San Lorenzo	San Francisco	
tš, ţ	tt́(i), i	y(i)	y(i)	y		y(i)	Series I.
tšatši[2]	ţatti	tšaii	taxí-[3]	tayi		ţaii	*bone*
patšan[4]	pattian	payan	paián-	payan		payan[5]	*blood*
	paine[6]						
huţ[7]		huya	uyá			huya	*mountain*
matšan-[8]	maian	mayan		mayan	mái.yan	maial[9]	*coyote*
ţ, tš	ţ (tš)	tš (ţ)	t	ţ, t	tr	t(?)	Series II.
tšatši	ţatti	tšaii	taxí-	tayi		ţaii[10]	*bone*
tšarax[11]	tšarak	tšara	taráx				*sky*
ţura-[12]	ţura	tšura	taráa			tᵖura[13]	*thunder*
	maţer	matšer	mátteri	maţer			*tobacco*
ţip[11]	ţipe	tšippi				tipa	*knife*
-toţ[11]	toţe	totš				tᵖota	*deer*
tšiš[11]		wi-ţes			ue-treš	mi-toš	*chief*

[1] When my article 'Penutian' appeared in this journal (13.205–219, 1947), covering the guttural series of consonants, I had similar data at hand to show the phonetic equations for the rest of the Penutian consonants and for the vowels and it was intended to present this in subsequent articles. This data was lost by the transportation company while I was traveling to obtain more accurate data on some of the Penutian languages. All that remained were some footnotes and appendixes to the manuscript and some stray scraps. The few that seemed of sufficient interest are presented here. For abbreviations and bibliography see the article 'Penutian'.

[2] K tšatš.

[3] Written tagím.

[4] By K; T patstša.

[5] Y. N., Valley pa·yax (K).

[6] paine *bloody*.

[7] By K.

[8] By K; also -mátsan. T mattša.

[9] Wr. my al *wolf*.

[10] Wr. tri ee.

[11] By K.

[12] Kroeber stated that "the initial is dental, not palatal t at Monterey." But Taylor wrote tru-ra-ta.

[13] For my transcription tᵖ see below.

series may be inferred to be ţ in San Juan Bautista, Santa Clara, San Jose, and San Lorenzo, judging by the usual use of ţ by Mason in the first of these dialects and by the occasional use of ţ or tr in others; and one may suspect that the consonant was ţ in the Monterey dialect, despite the alternation with tš.

In the first series the consonant was probably a very palatalized t́, made by placing the tip of the tongue on the lower teeth and the blade against the upper teeth and alveolar arch but with only very slight contact, in the San Juan Bautista dialect. This sounded sometimes like t'i, sometimes like i—the vowel formed by opening the air passage a very little. In view of the y in the first series in most dialects and the t́ inferred for San Juan Bautista, the consonant in the first series in the Monterey dialect was almost certainly tš and not ţ, and hence Kroeber's form huţ for *mountain* would be incorrect for hutš.

We may infer, then a series *t́ = Monterey tš = San Juan Bautista t́ = other dialects y (i); and a second series *ţ = all dialects ţ except perhaps Santa Cruz tš.

One will notice in the San Francisco column of the above table two words are written tᵖ. Actually they were written by Alcantara with p alone, but they correspond to words in other Costanoan dialects with t or ţ. According to description, ţ was apico-alveolar. In modern dialects of India a retroflex is pronounced by giving the tip of the tongue a single flip against the roof of the mouth. In the San Francisco dialect, however, the tip of the tongue was probably flipped against the back of the teeth, and slipped down over the upper lip until the air escaped between the tongue and the lower edge of the upper lip. Hence the fluctuation in recording this phoneme as t and p, as San Francisco tiwiš (tee wish) *flower*, but piwiš momakwa (pee wish mo mac wah) *rose*. Besides the two examples of tᵖ in the San Francisco dialect in the above table, note also San Jose ţuye *wind*, San Francisco tᵖuyeri (pu ya re); San Juan Bautista ţatska *plain*, San Francisco tᵖatʌk.

That this same phoneme existed in the other dialects is indicated by San Juan Bautista tultulle, pulpulle? *palpitate* (455); Santa Clara talmes *hand*, but Santa Cruz palmiš (spalmiš, given by K, is incorrect). One may guess that occasionally all the recorders accidentally hiţ upon p to record this phoneme in a certain word, as that for *rattlesnake*: San Juan Bautista ipiwa, Santa Clara eppiwa (eppigua) *snake*, Monterey ipy (K), iep (T); but San Juan Bautista koţewes *snakes*; cf. Yokuts Buena Vista ţiwiţiw (reduplication), Poso Creek ţiel, and Wintun S. tiwil (DK). Fortunately the recorders of Costanoan wrote this phoneme ţ, t, or tš more often than p.

2. Contraction in Miwok. Insufficient data could be found to do more than call attention to an apparent tendency to eliminate consonantal clusters in Miwok, especially those with sonant continuants:

Costanoan San Jose korme *moon*, Santa Clara kórme, San Francisco kolme; Miwok C. komé, N., S., Plains kOme.

Costanoan Monterey tols *knee* (K), San Juan Bautista toolos; Miwok Lake to-kOllO (<*tol-kOllO; kOllO *foot*).

Costanoan San Jose, Santa Cruz mišur *five*, Santa Clara mušúr; Miwok N. masOka, C. máššokka, S. mahOka (<proto-Miwok *maššol-ka).

Wintun SW tšapUl *blackbird*; Miwok Bodega tšapil, Marin dJapil, but C. tšapúkkati < *tšapúl-kati.

Maidu NW. palali *jackrabbit*; Miwok C. 'épla·li *yare*, N., S. eplalI, but Plains epalI (B).

Miwok C. šúntu *eye*, S. hụnţu, N. sụţụ, Lake šụ·t (F), Bodega šụt.

For clusters composed of stop consonants, only the following has been noted: Maidu S. potpoto *toad*; Miwok C. 'opóttotto *pollywog*.

3. Tolichi Dialect of Yokuts. Kroeber remarked that Yokuts l, n, y, and t (he might have added d) became w in the extinct Tolichi dialect he recorded from a Dumna

relative of the last surviving Tolichi. But n, l, and t are found in Tolichi, so the statement is only partially true. Since Kroeber did not assemble the data, but left the reader to find the examples in his short vocabulary, we shall reexamine the question here. I have found no exceptions to his rule that Yokuts y > Tolichi w: Dumna, yokotš *person*, Tolichi wokotš; D. yet- *to talk*, T. wat-; D. ga·yaxit *salmon*, T. ga·waxit. (y = w).

But for the other shifts: D. t́inik *nose*, T. winik; D. taxa·ti *berries*, T. waxato; D. aḳd-atš *child*, T. ḳow-itš. (t, t́, d = w). D. ošit *fire*, T. oxit; D. ga·yaxit *salmon*, T. ga·waxit; D. xat- *eat*, T. xat-; D. yet- *talk*, T. wat-; D. naťiť *rattlesnake*, T. waťiť. (-t, -t′ = -t, -t′).

The rule appears to be that t, t́, d > Tolichi w, but they are preserved when final in the stem. The first t́ of Tolichi waťiť *rattlesnake* is probably preserved because the word is onomatopoeic.

To the contrary it is only initial n which became Tolichi w; elsewhere in the word it is preserved: Dumna, nǫnei *men*, Tolichi, wówêi; D. nohoo *grizzly bear*, T. woxo; D. naťiť *rattlesnake*, T. waťiť (n- = w-). D. t́inik *nose*, winiḳ; D. ḳinim *acorn*, T. ḳimin; D. ugun- *drink*, T. ugun-; D. hawaan *greeting*, T. xawaxan; D. amin *his*, T. am^{u}in. (-n-, -n = -n-, -n).

l appears to be preserved in Tolichi when final, although the cognate for *sun* and *hot* makes this somewhat doubtful (the apparent shift of -l > -u): Dumna, moḳêla *woman*, Tolichi, moḳêwa; D. ilik *water*, T. iwix; D. lǫpits *small fish*, T. wopit; D. lihim- *run*, T. wuxim-; D. hološ *sit*, T. howox-; D. hileu *where*, T. hiẇeu; D. xapil *sun*, T. xapiu *hot*. (-l-, -l = w). D. wiu'ul *eagle*, T. wšušul; D. wowul- *to stand*, T. xwoxwul-. (-l = -l).

4. Of course morphological particles often do not follow strict phonetic requirements in every respect because of their enclitic, often unaccented position, conditions of sandhi, etc. But the list of 'suffixes' presented by Dixon and Kroeber went far beyond phonetic possibilities. I have added hardly anything to their list but I have subtracted a great deal. The Penutian languages are not closely related, as are the Athapaskan languages, and since we have no archaic Penutian language we can not expect to find many particles that are common to two or more languages of the family. The aim here has been to present a few morphemes, which seem to correspond functionally and at least fairly well phonetically, as a nucleus for further research.

Subjective: Miwok C. -' (F); Yokuts, all dialects (zero) (N).

Objective: Wintun N. -s (of 1st and 2nd sg. prons) (Dixon 463); Costanoan San Juan Bautista -se, -s·e (Mason 409).

Objective: Miwok N. -a (K, LNSF 280); Yokuts Yawelmani, Gashowa, etc. -a (N).

Objective: Miwok Sierra -i (K, LNSF 297); Yokuts Yawelmani, Gashowa, etc. -i (N).

Possessive: Miwok Sierra -ŋ, Marin -n (K, LNSF 297), C. -ŋ (F); Yokuts, all dialects -in, in some also -n (N); Wintun N. -n (Dixon 463), SE. -nu *genitive* (A).

Locative: Miwok -t, -tȯ *at, into, in, to* (definite spot), S. -t, -to, N., Marin -to (K, LNSF 297); Wintun N. -da *general locative* (of time or place) (Dixon 476); Maidu NE. -di *general locative*; *in, at, on*, -da *downward*, -doi *upward*, -dau *off from, separation*, -dik(no) *against, up to, alǫngside*, -tą *on top of* (Dixon 700–1, 712); Costanoan San Juan Bautista -tak (after vowels perhaps -tka) *locative*, -tun, -tum *ablative* (Mason 410); Yokuts Chauchila -t *ablative* (with demonstratives), archaic Yokuts *ablative* probably *-t, present Yawelmani, etc. -nit *ablative* < *indirective* -ni + -t (N).

Terminative: Miwok C. -m, -am *inessive* (Tozzer by K, LNSF 282, 297), -m, -m·ụ *at, into, in, to* (indefinite spot), -m·ụ *from* (F), S. -m, -ma *terminalis*(K, LNSF 297), Plains -m *terminalis, locative, comitative* (LNSF 297), N. -m *dative-locative* (K *terminalis*), *to, on* (LNSF 281); Costanoan San Juan Bautista -me *terminative, into the house of, to (you), with (you)* (Mason 409).

Negative: Maidu NE. -men (Dixon 707); Wintun N. -mina (Dixon 475), cf. SE. -mu (A).

Infinitive: Maidu NE. -n, -in (Dixon 701); Yokuts Yaudanchi, Chauchila, Wikchamni -n *verbal noun* (N); Costanoan San Juan Bautista -n *resultative, infinitive* (Mason 406).

Present tense: Wintun N. -ibi, -be (*incompleted action*) (Dixon 464, 469), ibi, ibe *be* (pres. tense) (Dixon 476), SE. -be- *be* (*inan. subj.*), -bo- *be* (*anim. subj.*); Maidu -bus, -bis *continuative, to live, stay, remain* (Dixon 704).

Past tense: Costanoan San Juan Bautista -s (Mason 416); Wintun N. -ise, -isu *past tense* (completed action) (Dixon 464, 470), SE. -sa *past* (*declarative*) (A); Miwok C. -se *past*, N. -še, -šu (K, LNSF 310); Maidu NE. -as, as- (Dixon 703); Yokuts Wikchamni -si aorist, Gashowa, Choynimni -ši (N).

Future tense: Miwok N. C. -i (K, LNSF 302); Yokuts Gashowa, Choynimni -i, Chukchansi -ė (N).

Frequentative: Maidu NE. -to *repeated or reciprocal action* (Dixon 507); Yokuts Tule-Kaweah, Valley -ta *frequentative* (DK), Yawelmani -da· *repetitive* (N).

Reciprocal: Miwok N. -bo, -bo-sa *reflexive*, C. -po-sa, Coast -ne-po (?) (K, LNSF 310); Costanoan San Juan Bautista -pu *reflexive*; Wintun -pu-ra *reciprocal* (Dixon 464).

Reflexive: Maidu NE. -us *reflexive* (Dixon 701); Yokuts Yawelmani, Wikchamni -iwis, Chukchansi -iwiṣ, Chauchila, Gashowa, Choynimni -iwiš *reflexive* or *reciprocal verbal noun*, Wikchamni -iwsa, Chukchansi -iwṣa, Chauchila -iwša·, Gashowa, Choynimni -iwša *reflexive-reciprocal* (N).

Noun agent: Miwok C. -pe, Coast -api (K, LNSF 310); Maidu NE. -pe *nominalizing suffix* (Dixon 705).

That: Miwok no- *that* (*there*) (A), Plains, Coast no, N. no-i (K, LNSF 309); Costanoan San Juan Bautista nu-nis, nu-p·i *that*, nupean *those*, San Francisco nu-huen (nu hu en) *far off*, Monterey nu-pi (K).

These inflections or particles will probably prove one of the easier tasks for the comparative grammarian working on Penutian. The writer had assembled a considerable mass of materials showing regular phonetic equations, and the principal problem on these comparisons would have been to work out the suffixes—in the Indo-European grammarians' use of the word. But I also had a considerable mass of materials showing irregularity of vowels; Freeland and Newman found vocalic alternation in Miwok and Yokuts respectively, and I suspect that this was characteristic of proto-Penutian, and that this will present a more difficult problem.

5. The Numeral Systems and the Name 'Penutian'. Dixon and Kroeber's designation of the family as 'Penutian,' basing it on two stems for *two*, was unfortunate.[14] A geographical name—say Vallonian since the languages were spoken generally by peoples occupying the Great Valley of California—would have been better. For the numerals correspond very seldom, and, although a fuller knowledge of the phonetics of the languages and of 'vowel gradation' may bring some of the divergent numerals into line, most of them never can be shown to have had a wide extension. Except for the word for *one*, Miwok is split between the Sierra and Coast dialects and no amount of juggling will show that many of the numerals correspond. In Costanoan the numerals agree only in Santa Cruz, Santa Clara, and San Jose dialects and in the San Juan Bautista and Soledad dialects up to *five* with the Monterey dialect agreeing with them on some numerals and not on others.

Since Dixon and Kroeber were daring innovators when they attempted to prove the existence of a Penutian family and since the

[14] Their division of the family into a Pen group (Wintun, Maidu, Yokuts) and a Uti group (Costanoan and Miwok) was based upon the numbers for *two*. The division was at least premature. In his investigation of relationship terms, Gifford found that "As it happens, all stems occurring in three of the five divisions occur at the same time in both the Pen and Uti groups" (op. cit., in "Penutian", p. 229).

numerals are one of the surest tests of genetic relationship in Indo-European languages, they felt it incumbent on them to prove that at least some of the Penutian numbers corresponded.

But correspondence of numerals is no sure guarantee of genetic relationship. Although the Sino-Tibetan numerals generally correspond there are some Tibeto-Burman languages in which most of the numbers have been borrowed from Indic. And I have shown that Nahālī, perhaps the only surviving remnant of the language of the Bhils of India, has borrowed all its numbers from 2 to 100—2 to 4 from Dravidian and higher numbers from Indic.[15] We shall probably find eventually that some of the Penutian numerals have been borrowed.

However, it was Pliny Earle Goddard who first pointed out to the writer that lack of correspondence of numerals was not very significant in deciding genetic relationship because counting had been done on the fingers, and the numbers were often the survival of this method of numeration.[16] Let us say that counting among the Sierra Miwok began with the thumb of the left hand, then *one* might have meant *thumb*, *two* might have meant *first finger* or *pointer finger*, *three* could have been *big finger* or *middle finger*, etc. But if the Costanoans began with the little finger of the left hand, then *one* could have been *little finger*, two *next finger*, etc. The complications are increased when *four* meant *twice two*, *eight* meant *twice four*, *nine* meant *one from ten*, etc.

This suggestion seems to me to offer the most promise for the study of Penutian numerals. We should not consider numerals as necessarily corresponding number for number from one language of the group to another, but as vocabulary. For example in Miwok Bodega kennekU *five* is literally *one hand* (kenne *one*, UkU *hand*) and similarly in Marin kenekUs (kenne *one*, UkUs *hand*), i.e., all the fingers on one hand. Similarly we can see that Marin Os'-Uya *eight* means *twice four* (ossa *two*, hUya *four*). Coast Miwok huya *four* has been replaced in Lake Miwok by OtOta (lit. *two-two*, Otta *two*) but perhaps survives in the -ia of Otta-ia *eight* (Otta *two*).

The Miwok word for *one* occurs in Bodega kenne-koto and Lake kene-nhElak *nine*; I do not know what the compounds mean, perhaps something like *one less* (*than all the fingers*), *one remaining* (if fingers are turned down as counted). Lake UkU-kUlsi *ten* contains the stem UkU *hand*, and we may infer that -kUlsi means something like *both*. Bodega osa-gitšI *twenty* is *two-tens* (osa *two*, gItši *ten*), and similarly Marin Osa-gItšis (ossa *two*, kIts'is *ten*); we may infer then that Lake Otta-tUmai *twenty* (Otta *two*) had a similar origin.

Sierra Miwok oyI-sa *four* may contain the remains of Coast Miwok osa *two* (cf. first part of compound with Plains *oyo-* two). Plains kene-kak, C. kene-kagu *seven* may contain the numeral *one*, the compound perhaps meaning something like *the one next*, i.e., *the next finger*. Miwok NE. and C. naa-tša *ten* contains the stem naa *twenty* and must mean something like *man-half* (i.e., *half his fingers and toes*), but the S. Sierra

[15] Nahālī, A Linguistic Study in Paleoethnography, Harvard Journ. Asiatic Studies 5.346–371 (1941).

[16] Of course Goddard was not the first to remark this. Bopp doubted that any language originally had words for numbers, and Grimm laid it down as an axiom that all numerals arise from names of the fingers. I have only been over a small part of the great mass of work written on primitive reckoning. A short bibliography is: Harold E. Driver, Wappo Ethnography, UCPAAE 36.196 (1936); Goddard, Analysis of Cold Lake Dialect, Anthrop. Papers Amer. Mus. Nat'l Hist. 10.115 (1912); Goddard, Beaver Dialect, op. cit. 10.437 (1917); Dixon and Kroeber, Numeral Systems of the Languages of California, AA 9.663–690 (especially pp. 684–90); Garrick Mallery, Sign Language among North American Indians compared with that among other peoples and deaf mutes, U. S. Bur. Ethnol., 1st Ann. Rep. 263–552 (1881); Er. Viaene, Essai sur la numération de quelques peuplades du Congo belge, Bull. Soc. Roy. Belge de Geographie 32.494–522 (1908); Ewald Fettweis, Wie man einstens rechnete, (Leipzig, Berlin, 1923).

dialect reverses the process and bases upon *ten*, for OtIak-naatša *twenty* (lit. *two-ten*, otIko *two*, naatša *ten*).

We have had sufficient analysis of the Miwok numerals to indicate that the lower numbers are used over again to form the higher ones. The question arises whether we may not find some of these Miwok numerals used in another Penutian language, but not in the same number. We find sa-ken or ša-ken *six* in several Costanoan dialects, and we may inquire whether the meaning was not originally *big one* (thumb), Miwok kenne *one*; and in the Santa Clara dialect we find kene-tš *seven* which may have meant *first finger*.

In Bodega Miwok we had kItšI, gItši *ten*, and San Juan Bautista Costanoan we have na-kitši *six*, ṭa-kitši *seven*. If kitši meant *other* (*hand*), for example, it could stand for *ten* when all fingers had been counted, while na-kitši *six* could mean *one* (*on*) *the other hand* and ṭa-kitši *two* (*on*) *the other hand*.[17]

We found above that Marin Os'-Uya *eight* was composed of ossa *two* and hUya *four*. In Costanoan Santa Cruz usa-tis, Santa Clara osa-tis we may have the same stem for *two* found in Bodega osa, Marin ossa.

Now we may note that all the Santa Clara numerals from *six* to *nine* seem to contain elements corresponding to Coast Miwok; I would tentatively interpret them: ša-ken *six*, or *big one*, i.e., *thumb*; kene-tš *seven* or *first finger* (Coast Miwok kenne *one*); osa-tis *eight*, or *second finger* (Coast Miwok osa, ossa *two*); telek-tiš *nine*, or *third finger* (Coast Miwok telEka *three*).

If this resemblance is due to borrowing, it would be the first time I had observed one language borrowing a neighbor's lower numerals to form its higher numerals. If it is not due to borrowing, it would mean the survival in the Santa Clara dialect of lower numerals, once common perhaps to the whole coastal area of Penutian, in compounds for Santa Clara higher numerals but the replacement of the stems kenne, osa, teleka in the lower numerals by the Costanoan forms utin, kapan, katoaš; this is something also that I have not seen before. I shall leave the reader on the several horns of the dilemma.[18]

[17] Cf. Tolowa, Hupa nax *one*, tak *two*.

[18] The only scrap of the main part of my work on Penutian which remains is Miwok C. šille *any trap*; Maidu S. sille; Miwok C. šákkaššaki *oriole*; Maidu S. sakátsaká *kingbird*; Miwok C. šá·tšawi *screech owl*, S. hatšáwI *owl*, *sp* (B-M); Yokuts Yaudanchi šo·tšu-de·tš *snowy owl*.

Miwok C. šúṇtų *eye*, S. hụṇtụ, N. sụtụ, Marin šUt, Lake šụ·t (F), sUṭ (B), Bodega šụt *eye*, šutu *forehead*, šuntu-m-pogla *eyebrows*; Maidu S. sụn *forehead* (A), sUn *forehead* (P), N. šúne (shuneh) *forehead* (P), NE. sụn-daka *forehead* (A); Wintun SW. sin (sin'h) *forehead* (S), sin (A), SE sin *forehead* (Bartlett).

Miwok C. ṭó·košu *ear*, S. tólkoho (G by P), Kawiya tólkosu, N. ṭokosų; Costanoan Santa Clara túkšuš, San Lorenzo TuKšuš, San Jose, San Juan Bautista tuksus, Monterey tuuks.

Yokuts Poso Creek ošot *fire*, Kings River ušut, Tule-Kaweah, Buena Vista ušit, N., Valley ošit, Yawelmani 'ọšit (N), Wikchamni 'uṣit, Chukchansi 'osit, Choynimni 'uṣut, Coconun sottol (sot toll) (S); Costanoan Santa Clara šottó, Monterey šoto (K), San Juan Bautista soton.

Wintun N. (?) šAmmi-t *deer* (T); Maidu NE. sụmí· (D), sọmí· (44.13).

Yokuts Yaudanchi ḳašop *mosquito* (K), Yawelmani ḳaṣuṗ; Costanoan Santa Cruz kašup.

I have added the words for *ear* and *mosquito* from my article on "Penutian." Since the scrap was only the second page of my comparisons on Penutian sibilants, I can only make the tentative equation: *š = Miwok C. š = S. h = N. s = Maidu S., NE. s = Costanoan Santa Clara š = San Juan Bautista s = Yokuts (most dialects) š (K), ṣ (N). For the other dialects we have insufficient data. Fortunately this does not leave entirely unsupported my statement regarding this shift in Miwok at the end of p. 213 of my article on "Penutian."

SENECA II

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1. Introduction
2. Informants
3. Phonetic system
4. Historical aspects

1. The following analysis of the Seneca language is based on material collected in the summer 1948, during a visit to the Alleghany Reservation in New York State. Its object is to give some further information regarding the phonetic and grammatical structure of this language beyond what has already been published in IJAL by Preston and Voegelin.[1] In presenting these facts I follow as much as possible the method and notation used by the previous authors; in the rare cases in which their statements differ from my own observations in regard to sound or grammatical form I draw from my notes without reservation, as the latter may be of some value either for a more thorough understanding of phonetic variants or as specimens of individual or dialectal variation.[2] For the object and purpose of such complementary papers on Seneca as the present one, see **1** of the aforesaid basical paper by Preston and Voegelin.

2. Here follows a list of the informants of which I have availed myself in gathering the present material (reference to them in the body of the paper is made by means of the abbreviations in parentheses following the names in the list):[3] 1, Oscar Nephew (O);[4] 2, Chauncy Johnny John (Ch); 3, Ed Curry (EC); 4, Mr. Jake Logan (JL); 5, Mrs. Logan (Mrs. L); 6, Selma Kraus (SK); 7, Boyd Johnson (BJ): 8, Mr. Torrence Clark (Mr. Cl); 9, Mrs. Clark (Mrs. Cl);[5] 10, Mrs. Florence Wheeler (Mrs. Wh). All informants lived at or near Quaker Bridge, N. Y.

3.1. Vowel sounds and diphthongs. The Seneca language has five fundamental oral vowels (cf. Seneca I, **1**): 1, æ, e, i, o (or u)[6] and two nasal vocalic phonemes: ę and ǫ. The diphthongs also are either oral: ae, ai, ao (cf. footnote 6), ea, ei, eo, oa, oe, oi,[7] or nasal: aę, aǫ, eǫ,[8] and oę[9] (other diphthongs may exist in the language, but are evidently rare). Apart from the diphthongs, Seneca has also geminated vowels (aa, ææ,[10] ee, ii, and oo), which are actualized either as long or repeated vowels. Prosodically, the diphthongs as well as the geminated vowels count as two syllables at least initially (see section **3.5**, end).

3.2. General values of the vowels and diphthongs. The vowel a sounds as in Spanish (approximately = 'a' in 'father'), e is like 'e' in 'bed' or 'a' in 'gate'[11] (cf.

[1] Seneca I, IJAL 15. 23–44 (1949).

[2] Preston and Voegelin depended for information mainly on one single speaker.

[3] By (c) we denote that the form thus marked was heard more or less *commonly*.

[4] The only living direct descendent of Cornplanter.

[5] By (Cl) is meant either Mr. or Mrs. Cl or both.

[6] The symbol o is chosen merely to conform with the usage in Seneca I; ao thus denotes the diphthong normally represented by au in phonetic writing.

[7] The diphthongs oa and oi are actualized almost as [wa] and [wi], respectively, the stress falling on the last element (cf. **3.5**): hoahkwaʔ *his bread*, oiktaʔ *thorn*.

[8] For the diphthongs aǫ and eǫ, see **3.3**.

[9] In the nasalized diphthongs we mark the nasalization (by means of a hook under the vowel) on the last element only, which is heard more distinctly nasal than the first element.

[10] This vowel, which we represent by a single symbol, only occurs as geminated (cf. **3.3**, **4.1**).

[11] However, with a tendency to become more like French é. The Indians pronounce 'hat' [het], 'egg' [ek], with a narrower e-sound than is common in English and 'shape' [še·p] (Ch), 'steak' [ste·k] (Mrs. Cl) without diphthongization, as in English.

section **3.4**), æ is like English 'a' in 'hat' or French ê; i is like English 'i' in 'big' or 'ee' in 'see'[12] or, when short, often like [ə]; o varies between the English short vowels in 'cup' and 'put,' on the one hand, and the long vowels in 'shoe' and 'show,' on the other (it is impossible to say which of these pronunciations is normal).[13]

3.3. The vowel sounds are modified according to whether they occur as long or short (cf. **3.2** to **3.4**). They are further modified by surrounding consonants. The most notable allophones are the following.

a followed by h tends to become [æ] (and often does)[14] and in the same case e assumes a considerably narrower (i-like) sound (in ohsehta *weeping willow*, o?nehsa? *sand*, or in the suffix -neh). On the other hand, a after w tends to become /ɔ/ (or English 'aw'), *e.g.*, in the prefixes swa-, twa-, akwa-, etc.; after y, it often rather tends toward [e]: prefix teyakya- (EC).

e is made wider before the glottal stop (see **3.8**): one?sa? *tree fungus, spunk* (e? rather like æ?) and correspondingly i is broadened to an e-like sound (hahci? *my elder brother*, -tki? *dirty*).

In the diphthongs the allophones appear still more complex; ae strongly tends to become /ai/: ae? *again* (which was at first regularly noted down as ai, ai?) and parallel to this trend oe often sounds like /oi/: henoęs *I like him* (Cl), oęnǫ? *song*.[15] On the other hand, ai tends toward /ei/, /æi/, or /əi/:[16] kait *tree* (Ch, EC), kaiwa *word*, ǫkwathwaishæ? *our soul* (O), hǫnǫthwais *their soul* (O). The diphthong ei seldom occurs;[17] for the pronunciation of oa and oi, see **3.1** (note 7).

The pronunciation of the nasalized diphthong eǫ (cf. **3.1**, notes 8, 9) involves a problem. It is certain in many cases that original aǫ has assumed the value eǫ (ęǫ):[18] keǫta? *tree* (cf. Mohawk karǫta-); in other cases aǫ is retained (cf. **10.4** (c), being equivalent to the diphthong in the English word 'noun' (nasalized): kaǫwa? *boat* (EC, Mr. Cl), kaǫshæ? *box* (Mrs. Cl), haǫci? *negro* (Mrs. Cl). There were cases in which the diphthongs eǫ and aǫ were found to alternate,[19] as in keǫkæ? ~ k'ęǫkææ? (Mrs. Cl), kaǫkæ? ~ kąǫkææ? (O) *elm tree*, whether or not the latter pronunciation was due to English influence.[20]

[12] Or French or Spanish *i* (it is never diphthongized, as in English).

[13] When the Indians pronounce words like English 'tobacco' they sound like 'toobaccoo' [u]; and they pronounce, 'balloon' like 'ballone' [o].

[14] That a and æ are distinct phonemes appears clearly in cases where the former occurs geminated: oyę?kwaa? *tobacco* (Mrs. Cl: in Mohawk oienkwa, Cuoq), which is clearly distinct from oyę?kwææ? *smoke* (Mrs. Cl: in Mohawk oienkwara, Cuoq); even the Indians are positively aware of the different terminations in akehikwaa? *my hat* and sahikwæ? *your hat* (O, Cl). The short æ must, however, be considered as an allophone of a: thus snekeah *drink* (imperative) alternates with snekeæh (short æ: Mrs. Cl, O). Also before certain other consonants (such as the unreleased -t), æ (short) is a rather common variant of a; tyoshat [-æt] *one year* (EC), swęnishat [-æt] *one day* (Ch), hatkęh [het-] *get up* (Mrs. Cl). The fact that short æ is seldom used in the Indians' pronunciation of English (*e.g.*, [lekros] for 'lacrosse', [hensən] for 'Hanson') tends to prove the correctness of this view.

[15] Cf. the Seneca pronunciation of the English surname *Owen* [oin].

[16] We assume that an original [ai] tends to become [əi] among the Seneca.

[17] Owing to the rare occurrence of this diphthong, it was not possible to ascertain whether it constitutes an independent phoneme. Examples, in which it probably occurs are ei *cherry* (JL; cf. Mohawk eri *cerise de France*, Cuoq) and yei *six*. The numeral *four* (in Mohawk kaieri) was sometimes heard as kai (or [kæi]; cf. under **3.2**), sometimes as kei ([k'ei], Mrs. Cl).

[18] Evidently because nasal a (ą) becomes ę in Iroquois. It ought to be observed that k is palatalized in front of eǫ, but not in front of aǫ (thus k'eǫta- = keǫta-). Another variant of eǫ is iǫ, as in keǫ?ke? *lasso*, which may sound [k'eǫ?ke?] and even [k'iǫ?ke?] (Mrs. Cl). The final particle meaning *it is said* (*that*) is probably originally -ke?ǫ but it currently sounds -kyǫ?.

[19] As a matter of fact, it was sometimes difficult to distinguish effectively between aǫ, eǫ, and oǫ (see **3.6**).

[20] It is perhaps typical that the young son of

3.4. Vowel quantity. Vowels can be either short or long (**3.2**). It appears from an analysis of the phonetic system that the length rather depends on position (stress or phonetic surroundings). In my original notes, many words were noted down sometimes with a long, sometimes with a short vowel. But a decided preference of short vowels can be perceived in front of h and ʔ as well as before double or compound conconants: compare for instance akĕ'hikwaaʔ *my hat* (Cl; from kahikwæʔ *hat*) and akē'khwaʔ *my food* (from kakhwaʔ *food*);[21] oʔnĕ'hsaʔ *sand* and onē'kaʔ *water, whiskey*; hăksaʔa *boy* and hākǫtes *long-nosed one*; yĕksaʔa *girl* and yēneyes *she is tall*. Certain consonant groups such as kw (cf. footnote 21) do not shorten the preceding vowel: kākwekǫh *all*, kahīkwæʔ *hat*; in the case of aspirated stops (kh and th) the quantity of the preceding vowel is not fixed: cf. otēkhaʔ *it is burning* (Mrs. Cl) and ocīkheʔtaʔ *salt* (Mrs. Cl). There are even cases in which a geminated vowel is shortened before h (or a consonant group): kæhkwaaʔ *sun* (EC, Mrs. Cl), in which æ (= æ æ; see **3.1**, note 10) generally sounds as [æ], while the accent falls on the first syllable (cf. section **3.5**, end). The quantity also depends on stress; thus, for instance, stressed -os has a short vowel and lengthened final -s, whereas unstressed -os has a long vowel followed by an -s of normal quantity: one'kanŏ's· *fresh water*, sataǫ'tiyŏ's· *listen*, as compared with aka'taǫti'yōs *I am just listening* (Mrs. Cl), hata'hsōs *he is painting himself* (O); the same rule may hold for -is (cf. hanǫ'hsǫni's· *he is building a house*; EC). The suffixes -ek, -es (= *long*), and -ot were always noted with a long vowel; on the other hand, in kanǫhseskeh *council house* (or *at* or *in the council house* or *long house*), katækeskeǫ *Cataraugus Reservation* (SK), the syllable -es- was pronounced very short and with the vowel slurred over; the word for *broom* was heard yiskewakta? (O), but might possibly be yeskewakta? since the prefix is normally ye- (see **5.3**; cfr. kiskewas *I sweep*). None of the fluctuations observed in the vowel length in the cases now mentioned appear to be phonemic.

3.5. Stress. From numberless examples of the type oneka? *whiskey* (originally *water*),[22] in which the stress was on different occasions noted as falling on any one of the three syllables, it appears that syllabic stress in Seneca is entirely dependent on the structure of the word. By comparing the entire material collected, it is found that a strong tendency prevails to stress the second syllable from the beginning (that is, in words not containing a diphthong or geminated vowel, for which see below). Notice especially alternations in the flections such as haksa-? *boy* and ake'ksaʔtaʔ *my child*, kanǫ'hsot *house* and ǫkni'nǫhsaʔkeh *in our* (dual) *houses* (Ch), ake'hikwaaʔ *my hat* (O, Cl) and sahi'kwæʔ *your hat* (Cl). (Nevertheless, dissyllabic words, especially those in which both syllables had a long vowel were often rather stressed on the first syllable: hokwa *nearby*, sikwa *go away*, tikwa *I don't know*, tokęs *yes*, wiyo (*it is*) *good*; but the interjection tyihe *hey* was stressed on the last syllable.) The second syllable from the beginning of the word generally gives the key to the stressing of the following syllables, of which, as a rule, even syllables (counted from the beginning of the word) are stressed and odd syllable unstressed: ǫknínǫhsaʔkeh (see above), kanǫ'hsaka'yǫh *old house* (Ch), etc. The alternation of stressed and unstressed syllables is even of more importance than the rule that the second syllable from the beginning determines the accentuation of the word; if for any reason

the Clarks (who hardly spoke Seneca) pronounced keǫtaʔ *tree* as [kaunta], that is, with the same diphthong as in English 'counter' which sound he evidently identified with the Seneca diphthong.

[21] It appears from the long vowel preceding -kw- in these words that this consonant is more in the nature of labialized k than of a compound sound.

[22] '(Fresh) water' is now called onekanos.

(emphasis or the influence of surrounding words?) the first syllable is stressed instead of the second, the third and fifth syllables will be stressed as well: ti'yashe' teni'ksa?a *two boys* (Ch).[23] Neither is the second syllable of the word necessarily the one which carries the main stress; very often it is found that one of the following (even) syllables is pronounced with greater force: onekano's *fresh water*, ohsǫtano' *cold night* (Ch), which are generally stressed on the last syllable, ohsǫtakwe'kǫh *all night* (Mrs. Cl), which is stressed on the penult. Since geminated (long) vowels and diphthongs arise from contraction of two syllables, the former must always be stressed (since either their first or second element will be even in counting the vowels from the beginning of the word): kæ'hkwaa? *sun* (cf. **3.1.** note 10, and **3.4**), kai'wa *word*, oi'wa *news*,[24] keǫta? *tree* (Ch, O).

3.6. Nasalization. There are only two nasal vowels which occur in all positions: ę and ǫ (a nasalized a only occurs in contact with other nasal sounds); in diphthongs both elements are generally nasalized (even though we mark only the last element; cf. **3.1**, note 9). Owing to the fact that the nasal vowels are fewer in number than the oral vowels, the former have a wider range of variation than the latter. Thus ę is a front vowel, ranging between the vowels in the French words *un* and *vin*, while o ranges between the vowels in the French word *bon* and *banc*: kęcoh *fish* (EC), hǫkweh *man* (EC). The geminated nasal oǫ is often slightly diphthongal in sound, approximating English 'aw' in 'saw' followed by short 'u' in 'put' (which latter however tends to disappear): *e.g.*, oǫta? *ear* (Mrs. C.). Before n, the nasal character of a vowel is often modified and it was found especially that the sequence ęn could assume the values of the English syllables 'un,' 'en,' or 'in,' as hahsęnowaneh *chief* (EC), sęniyǫ *three* (EC, Mrs. Cl; the nasalization is quite audible in sęh *three*), kwęnis *cent*;[25] ǫn also sometimes tends to lose its nasality: sǫna?ot *who (is it)*? (EC; cf. sǫ *who?* with strong nasalization). The nasalized diphthongs are aę, aǫ, eǫ, and oę; of these, aę is like the diphthong in English 'mine' (nasalized) and oę somewhat like the diphthong in English 'anoint' (nasalized): waę? *he said* (EC, Mrs. Cl), soę *night* (O), soękhaa? *moon* (Ch). As for the diphthongs aǫ and eǫ, see section **3.3**, notes 18, 19, 20. Notice that the nasalization generally affects all adjacent vowels and may even extend over a semivowel, as in kawęnyahsa? *her heart* (pronounced kąwę-, O).

3.7. Consonants. The consonants used in Seneca are the following nine: c (= ts), h, k, n, s, t, w, y, and the glottal stop (?).[26] The stops (k and t) are pronounced without aspiration, but are indifferent as to sonority: k is often heard as English 'g' and t as English 'd.'[27] Ch often pronounces t as [ǰ-dž]: hotinǫhsa?keh *in their* (masc.) *house*, otinǫhsa?keh *in their* (fem.) *house*; even the English word 'deermeat' was heard pro-

[23] In this case, teniksa?a may have influenced the rhythm of the preceding word.

[24] The second element is more stressed in this case, so that the word sounds wi'wa (cf. note 7).

[25] From English 'pennies'; the reason why ę is substituted for the English short 'e' is evidently that Seneca ęn answers more closely to English 'en' than Seneca en (with a long, narrow vowel).

[26] The sounds of l, r, and labial consonants are missing in Seneca. Even in the pronunciation of English words by Seneca bilinguals, they offer certain difficulties (cf. [pet] for 'bread,'[waiə] 'warrior,' 0). The labials are now usually pronounced in English words, but at one time they were changed in loanwords (cf. note 25).

[27] This is most clearly seen in the Indians' pronunciation of English words. They sometimes seem to pronounce 'g' for 'k' as 'burdock' ('-dog,' Ch), 'tobacco' ('too-baggoo' 0), or 't' for 'd' as 'bed' ('bet'), 'good' ('goot' Mrs. Cl), 'head' ('het,' EC), and sometimes 'k' for 'g', as 'bughouse' ('buck-'), 'egg' ('eck,' Mrs. Cl). In the words 'said,' 'big,' the final consonant was noted as half-voiced; even fricatives and affricates seem indifferent as to sonority in the Seneca pronunciation of English words: 'ravine' ('rafeen' 0), 'devil' ('defil,' Mr. Cl), 'matches' ('madges'), 'shoes' [ǯo·s], 'alive' ('alife').

nounced by him as /džimit/. Final -k and -t are unreleased stops: i heawak *I am his son* (EC), tyoshæt *one year* (EC). The Seneca language does not distinguish between [s] and [š], on the one hand, or between [ts] and [tš], on the other.[28] Nevertheless, an š-like sound was often heard instead of sy (cf. English 'sure,' 'mission,' etc.): syee? *you do* (pronounced šee? by Mrs. Cl, as against se? *you go*). It is therefore often very difficult to distinguish between c and ty and it is possible that many of the Indians actually pronounced them alike (with a sound resembling the English 't' in 'tune'). Before front vowels (e and i; cf. **3.3**, note 18), k is often palatalized (Ch often said ty for ky). In contact with a nasal vowel, w often sounds like m: waę?kyǫ? *he said, it is said* (pronounced mąę?kyǫ?; Mrs. Cl), ęwaka?tyǫk *I am going to get scared* (pronounced ęmąka?tyok; Mr. Cl), hawęnyahsa? *his heart* (hąmęnyahsa?; O).

3.8. The glottal stop (like other phonemes foreign to the English language) shows a certain tendency to disappear in the pronunciation of bilingual Senecas. Conversely, certain informants (in order to improve their language?) were inclined to introduce the glottal stop in a number of words in which it was never used by the other speakers; thus, for instance, Ch used onę?ǫ (for oneǫ *corn*, EC; perhaps correctly oneǫ?); ci?tę?ǫ (for cite?ǫ *bird*; EC, O), etc.[29] Every initial vowel may be considered as being preceded by a glottal occlusion; thus: kaiwa o?kih = kaiwa?-o?kih *I said something worth while* (O). Sometimes a glottal stop is heard before an unreleased stop: testat *get up* (pronounced testa?t; Mrs. Cl), kashenęt *domestic animal* (pronounced kashenę?t; Mrs. Cl); in other cases it may be functional: akno?ękǫ?s *I have got a headache* (Mrs. Cl). Before h, the glottal stop generally disappears: nehoh *here* (cf. ne? *the*), ne hǫkweh *the man* (for ne? hǫkweh).[30] The glottal stop cannot occur between consonants; hence we find taknikǫyohseh *I am restless* (EC) for ta?k-?nikǫ- (cf. -?nikoę *mind*). Before two consonants the glottal stop may be suppressed: teskawi *you did not give me anything* (Mrs. Cl); cf. the preceding example, in which tak- stands for ta?k-. But the glottal stop remains in te?knoęs *I do not like it* (Cl). In word-final position, after a geminated vowel or a diphthong, the glottal stop (as well as -h) is apt to be weakened or suppressed.

4. Historical aspects.

4.1. The differences between the various Iroquoian languages (except Huron and Cherokee) are comparatively small. Hence Seneca would be easily understood by a Cayuga or even a Mohawk.[31] Seneca nevertheless differs from the latter language in the loss of the l- (or r-) sound: compare Seneca kæhkwaa? *sun* with Mohawk karahkwa-, Seneca -yee? *do* with Mohawk -yere?, Seneca ae? *again* with Mohawk are? In some words Seneca ny was found to correspond to Mohawk ri (Iroquois ly): awęnyahsa? *heart* (Mohawk aweriahsa-), -nyo- *kill* (Mohawk -rio-, Oneida -liu-), -(a)tawęnye- *walk* (Mohawk -(a)tawęrie-). As mentioned (**3.3** note 14), Seneca changes a into [æ] before h (and perhaps certain other consonants, such as -k and -t) and in cases in which æ is geminated this vowel assumes the character of a phoneme; hence karahkwa- > kæhkwaa?.[32] Intervocalically,

[28] This is also seen in the Indians' pronunciation of English words: 'star' was pronounced 'shtar' (Ch), 'mister' as 'mishter' (Ch), 'visiting' as 'fishiting' (Mr. Cl).

[29] Others used to imitate Ch's pronunciation by introducing a number of glottal catches in any word.

[30] Conversely, a final -h may disappear before an initial glottal stop: kęco?oęnǫ? *fish song* (also kęcoh oęnǫ? = kęcoh ?oęnǫ?, see above, or kęcoęnǫ?; EC). Hence forms with and without final -h often interchange.

[31] See now Harold Hickerson, Glen D. Turner, Nancy P. Hickerson, Testing Procedures for Estimating Transfer of Information Among Iroquois Dialects and Languages, IJAL 18.1-8 (1952).

[32] Cf. the Onondaga form gaä ''gwā' (according to Hewitt).

h also often disappears: waachen *he got tired* (from wa-hachen), yet without affecting a preceding a; hence we cannot infer from general facts which consonants may have been lost between the original a's in katækeskeǫ *Cataraugus Reservation* (SK; cf. the English form *Cataraugus*). The vowels i and o before another vowel of different quality are changed into y and w, respectively; cf. osteǫti? *it rains* and osteǫtyǫ? *it is raining* (EC; for osteǫti-ǫ?), katkatho? *I look* and ękatkathwęh *I did look* (EC; for ękatkatho-ęh).

4.2. Seneca seems in certain ways to represent a more advanced form of Iroquois than Mohawk. The word oneka? is no longer used for *water* (as in Mohawk), but (*fresh*) *water* is commonly known as onekanos (oneka? being reserved for *strong drink, whiskey*). Many words used in Mohawk are obsolete in Seneca, which prefers derivations. Thus, beside kanǫhsa? *house* (a word which is recognized by O), we find the current form kanǫhsot (which in Mohawk means *there is a house standing*) and of the same type are kawenot *island* (in Mohawk = *there is an island*)[33] and others in -ot. The suffixed adjective -kowa (which in Mohawk generally means *great*) has usually the sense of *fine, handsome*, or *pretty* in Seneca (the semantic evolution being the same as for -iyo).

[33] Kawenote *il y a une île* (Cuoq); the form without -ot occurs in Onondaga tgă'hwe''no' (Hewitt).

SAMENESS AND DIFFERENCE IN TWO ISLAND CARIB DIALECTS

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DOMINICA, BRITISH WEST INDIES

0. Introduction
1. Phonemic contrasts
2. Morpheme comparison
3. Basic vocabulary comparison
4. Syntactic comparison and summary

0. The following is an attempt to gauge the degree of proximity between modern Central American and recent Dominican Island Carib. Data on the former dialect were collected in 1947 by myself, and consist of about 8000 words of texts (including conversations, stories, and songs), besides elicited translations, paradigms, etc. The Dominican corpus consists, in the main, of some 250 words of connected text of the personal-history type together with a grammatical sketch collected at the end of the last century by Dr. Rat.[1] The latter has been checked and supplemented to some small extent by the writer's own meagre gleanings, obtained at odd times between the years 1930 and 1941 from Dominica Caribs who—although themselves Creole speakers—had heard the old language spoken in their youth by parents or grandparents. There can be no question of either asking or testing informants at the present, since the last native speaker of this dialect died some time during the second decade of this century; and the counting of samenesses is severely restricted by the very inadequate data recorded.[2]

1. Modern Central American Island Carib has the following phonemes: b p f m d t c s n l r g k h i e a o u Ṿ (nasalized vowels) and /'/ (stress accent). The two series of stops are distinguished by voicing and by lack of it; however, apart from recent loanwords, /p/ and /k/ are confined to about half a dozen words each and to initial position only. Phonemes have the usual phonetic values of the symbols employed, with the following exceptions: /c/ varies freely from [č] to [š]; /h/ varies according to position and stress from an aspirate to a mild velar spirant (comparable to Spanish jota), and, while usually voiceless, is occasionally voiced intervocalically; /o/ is a mid-high to high back unrounded vowel, [ë] to [ï]; /u/ is usually a high back rounded vowel, but when unstressed word-final is sometimes heard as a closely rounded [o]. Recent Dominican contained: b p m t s n l r k h i e a o u, and probably nasalized vowels and stress accent; while /nh/ (postaspirated n) may or may not have been a separate phoneme. Rat also wrote: f [f], ch (defined as [č] when initial, and as [x] when final), y, w, and o ([o], as distinct from my /o/, which Rat wrote ŭ, and described as [ü]);[3] and says that "whenever two or more vowels are in contact each is pronounced separately"; while I recorded [š] and [g] in one or two words only. Rat

[1] Joseph Numa Rat, The Carib language as now spoken in Dominica, West Indies; in The Journal of the Anthropological Institute of Great Britain and Ireland, XXVII (1898), 293–315.

[2] An attempt has been made, in so far as the data permit, to combine the methods set forth by C. F. Voegelin and Zellig Harris, Methods of Determining Intelligibility among Dialects of Natural Languages, Proceedings of the American Philosophical Society, 95 (1951), 322–329, with those of Morris Swadesh, as explained in Salish Internal Relationships, IJAL 16, 157–167.

[3] Although its phonetic value does not affect the pattern, I may say that recent Dominican /o/, as I heard it, had the same value as /o/ has in the Central American dialect. Its correspondence in early Dominican is described by Breton as varying from [ö] to [ə] (French eu to the sound of the vowel of French me, te, se, etc.). Recent Dominican /o/ is unlikely to have been [ü], as this sound, as in Central American today, was an allophone of /u/ occurring before /i/ or /e/.

does not even mention nasalized vowels, and thought that stress (although he marked it) was automatic: "As a rule to which I remember no exception, the accent in words of two syllables is placed on the penultimate, and, in those of three or more syllables, on the antepenultimate syllable."

My own records show /b/ of recent Dominican to have been an unaspirated bilabial stop which might be partly or wholly unvoiced in word-initial, but was voiced elsewhere; while /p/ was a strongly aspirated and always voiceless bilabial stop, which was frequently spirantized intervocalically when it followed immediately upon loud stress, as in mápuia [máøwiya] *bush spirit* or karípuna [karíøuna] *Carib*. Thus, Breton's mid-seventeenth century Dominican 'iróponti *il est bon* (with stress diversely marked by him, in other places, on the first or on the third syllable), was recorded as 'irúfuti' by Rat, and as [iropʰ'ǫǫti] by myself, without change of meaning; while Breton's 'apfoúraco níem *ie souffle*' corresponds to Rat's 'napúraku'. The latter author's ch = [č] is attested in only one base, which he writes 'chíse-' and 'chisén-', corresponding to Breton's 'kínchin' and 'kínchen', and to modern Central American hísię *dear or pleasing*; and consists of a nominal stem to which is prefixed attributive kA- (of early Dominican) or gA- ~ hA- (of Central American). As it is clear from other evidence that this prefix, in the form of kA- ~ hA-, was still productive in recent Dominican, the [č] recorded by Rat must be either an error on his part or an example of Creole influence on his informant's speech—since, in Creole, French /k/ before a front vowel regularly becomes Creole /č/. Apart from what he says of it under the heading 'orthography', and which has been already cited, Rat's ch = [x] occurs nowhere in his article or texts; and it would therefore seem that he later decided to equate it with h. Indeed, according to my own records, non-initial /h/ was usually head as [x], and sometimes as [kʰ], as, for example, in abínaha *to dance*, in contrast to arúmuka *to sleep*, in which the /k/ is unaspirated. On the other hand, my own data show no contrast between the aspirate and the voiceless velar spirant. There can be no doubt that [o] and [u] were members of the same phoneme in recent Dominican, as they were in Breton's day and still are in the Central American dialect; so I transcribe Rat's 'luni, lu, loni, lo', all meaning *to or for him*, as luni and lų respectively.

The setting up of the semi-vowels y and w as phonemes of recent Dominican is unjustifiable if stress was, as I take it to have been, phonemic; and it would complicate the morphophonology unnecessarily, as in the case of Central American. Although Rat does not mention or indicate nasalized vowels, one might suspect their occurrence from such alternative spellings as yánhi and yáhi *there*, chíse- but chisén- *dear*, or the suffix -se and -sen *out of, by*, etc. Such were, at any rate, distinctly heard and recorded by me, as in: ábą *one*, amúlę *younger brother*, áųli *dog*, buį *full*, hiąti *he is small*, hįaru *woman*, hįsi ~ hįnsi *stinking*; in contrast to the oral vowels in: báiba *go*: núle *my 'food'* (including such things as yams, sweet potatoes, plantains, but not meat), áuhue *to die*, lókui *penis*, mápuia *bush spirit*, éieri *man*, ísiri *nose*; although nasalization following a nasal consonant, as in mą́ba ~ mą́mba *honey*, may be non-phonemic for this dialect, since my own records show it to have been all but general in this position. Moreover, early Dominican and modern Central American (except for the position after nasals) show nasalized vowels in all correspondences with recent Dominican forms containing them. I am rather less certain about stress accent; and it may be that recent Dominican had automatic phrase stress (rather than word stress).[4] However, Rat himself writes 'nakútahani' *my burning*

[4] It is not clear whether Chevalier, Rat's informant, spoke Island Carib as his native language, or as a second language. At all events, as local Creole has no free stress accent, its native speakers are particularly unreliable with regard to the stress on Carib words.

or roasting him, 'nibáya' *my (grand)children* (although elsewhere he has 'níbaya'), separates the pronominal prefix from its base in the aorist auxiliary verb 'wa múti'—i.e., uamúti *we did*, and writes three words as one in 'kutawaháluba' *when we have burnt*; this last form consisting of a complement, kuta *burnt*, followed by two auxiliaries: the perfective, uahá, bearing the prefixed marker of first person plural, uA-, and the subordinative, luba, bearing that of third person masculine singular, 1 ∦ -. Minimally contrasting pairs show that stress was and is phonemic for the seventeenth century Dominican as well as for the modern Central American dialects; while such recent Dominican forms recorded by myself as: amúlę *younger brother*, itúke *kinsman*, nisíbu *my face*, nukúti *my foot/feet* (one of only two forms I recorded with phonetic [g] for /k/); or nítiburi *my hair*, níbukaią *my elder brother*, núkusili *my father*, núkusuru *my mother*, are accented analogously with their Central American and with their early Dominican correspondences, except that Breton, in the case of the last two examples, also gives divergent accentuations in some places. Like [g], [š] was heard in only two recent Dominican forms: [šírakwa] *split or pierced*, and [ríša] *erect or outstanding, straight, right* (*correct*). In the old dialect at least, neither [g] nor [š] was a phoneme; for Breton frequently writes the same forms now with a k or a c, and elsewhere with a g; while he says explicitly that [š] and [s] were idiolectic variants.

So far as our data go, the conclusion seems unavoidable that modern Central American /d t/ and /c s/ were represented in both early and recent Dominican by /t/ and /s/ only. The following appear to be the normal correspondences between the first and the last of these dialects: b, b; f, p; m, m; d/t, t; c/s, s; n, n; l, l; r, r; g, k; h, h; i. i; e, e; a, a; o, o; u, u; V̨, V̨; and stress accent in both. This still leaves the anomalous /p/ and /k/ of the Central American dialect unexplained, for the very limited distribution of these phonemes inhibits comparison to the splitting or earlier /t/ and /s/.

2. In this and the following sections presumed correspondences and lack of such will be indicated by a parenthetical plus or minus after the forms to which they refer. Stress will not be marked for recent Dominican except where my own recording suggests that it did not conform to Rat's rule, or where the latter is obscured by my non-use of semi-vowels.

Person-marker prefixes may be illustrated with the nominal base ilógo (Central American), iloko (recent Dominican), whose nearest English translation is perhaps *pet*, although the Island Carib forms refer to any domestic or domesticated animal, while their possessed forms are always preposed to the names of such when referring to an owner; so, nilógo áųli, niloko aųli *my dog* (+); bilógo áųli, biloko aųli *thy dog* (+); lilógo áųli, liloko aųli *his dog* (+); tilógo áųli, tiloko aųli *her dog* (+); ualógo áųli, ualoko aųli *our dog* (+); hilógo áųli, hiloko aųli *your dog* (+); halógo áųli, nhaloko aųli *their dog* (+).

From any prefixable noun or nominal base, attributive and privative derivatives may be formed by prefixing gA- ~ hA- or mA- respectively in Central American, kA- ~ hA- or mA- in recent Dominican; and these function as predicative adjectives, or constitute the bases of verbs derived from them. So, from barúru, baruru *plantain(s)*, come gabáruru, kabaruru *having plantains*, and mabáruru, mabaruru *without plantains —plantainless*. The exactitude of the correspondences, gA- ~ hA-, kA- ~ hA- (+); mA-, mA- (+), is further borne out by the use of the rare alternant hA-,as in hanúfudetina, hanuhutetina *I'm afraid*, from anúfude, anuhute *fear*; and by the analogous employment of these prefixes to form adjectives and verbs denoting ability or disposition, or lack of such, as in gáigatti, káikatti *he can or does eat*; máigatti, máikatti *he cannot or does not eat*; from áiga, aika *to eat*.

Person-marker suffixes for the two dialects

are: -na, -na (+); -bu, -bu (+); -i, -i (+); -u ~ -ų, -u (+); -ua, -ua (+); -o, -ho (+); -ių ~ -ią ~ -nu, -iú ~ -ią ~ -nų (+); as in the derived verbs: gabárurutína, kabarurutina *I have plantains*; gabárurutíbu, kabarurutibu *thou hast plantains*; gabáruruti, kabaruruti *he has plantains*; gabárurutu, kabarurutu *she has plantains*; gabárurut(i)ua, kabarurutiua *we have plantains*; gabáruruto, kabarurutiho *ye have plantains*; gabárurutíų, kabarurutių *they have plantains*.

Only one set of prefixed and one set of suffixed person markers exist in either dialect, and these serve any word-class that is or may be inflected for person; so, narí-hubadíbu, narihubatibu *I'll see thee*, barí-hubadína, barihubatina *thou'lt see me*, tuágu, tuáku *upon or about her*.

The Island Carib verb has five aspects (besides the indefinitive in -a or -ua), whose correspondences in the two dialects under comparison are: -ba, -ba (+) imperfective (with future tense and subordinative functions); -ią, -ią (+) progressive; -ha ~ -a, -ha ~ -a (+) perfective; -gi ~ -ge, -ki (+) durative, and -ti ~ -t, -ti ~ -t (+) aorist. These may be illustrated as follows: badóguba, batokuba *thou'lt do/make*, or (barúmuguią buga le) badógubalì, (barumukaią-buka) batokubali (*thou wert sleeping when*) *thou didst it*, from adóga, atoka *to do or make*, (note that the loanword le *when* does not occur in the Dominican form); tabuídahaią, tabuitahaią *she is sweeping*, from abuídaha, abuitaha *to sweep*; sų́haią auáirida, sųhanų auaita *they have finished getting big*, from sų, sų *all*, and auáirida, auai(ri?) ta *to get big* (from uáiri, uairi *big*); niǫgídina, hiąkitina *I am still small*, from niǫ-, hią- *small* (not attested in free form); adógatu, atokatu *she made*, harútių, harutių *they are white*, nibusigáitina, ibisikaetina *I am ashamed*. Two copulas whose function is not clear occur before some or all person-marker suffixes in some aspects. They are -dI, -tI (+), and -lI ~ -r, -lI ~ -r (+); and their employment is usually—although apparently not in all cases—analogous in both dialects. Their use may be illustrated by uáihadina, uaihatina *I have become old*; uáihali, uáihali *he has grown old*; úaiharu, uáiharu *she has grown old*.

Rat did not proceed in his analysis beyond such familiar notions as declensions and conjugations; and was apt to attribute all 'irregularities', such as absence of plural forms of nouns denoting inanimate objects, "to the want of education as well as to the indolence of those by whom the Carib language is now spoken, the context being left to indicate the number of the noun". One may even suspect that he has, in some instances, emended such slipshod ways to accord with his own standards of linguistic mores. Thus, perhaps, his barumukaią *thou'rt sleeping*, from arumuka *to sleep*, by analogy with tahorohaią *she is grating*, from ahoroha *to grate*; where Central American, analogously with early Dominican, has barúmuguią *thou'rt sleeping*, from arúmuga *to sleep*, but táhorohaią *she is grating*, from áhoroha *to grate*; the verb participle (and not the indefinite form of the verb) being the base for the progressive aspect, as well as for the imperfective (in which it is also shown by Rat).

That the participal form of the verb did have an independent existence in recent Dominican is evident, and may be illustrated from such correspondences (Central American forms being given first) as: (lubáragiua) lágudu, (lubarakiua) lakutu (*previous to it*) *its burning*, from águda, akuta *to burn*; (gíbeti) lanógo (uéiu), (kibeti) lanoko (uéiu) (*it is many*) *its taking* (*days*)—i.e., *it takes many days*, from anóga, anoka *to take*; nágudaháni, nakútahani *my burning it*, with which compare águdai, akutai *to burn it*; áigini, aikini *food or meal*, from áiga, aika *to eat*; these examples exhibiting moreover the same protean shape of the participial morpheme, morphophonemically -UNE, -UNE (+), which I have described elsewhere.

The verbalizing prefix a-, a- (+) is shown by comparing águda, akuta *to burn*, with the

phrase gudá ua, kuta uahá *we have burnt*, in which gudá, kuta *burnt* functions as a predicative adjective, complement of the postposed auxiliary.

The tensive verb suffix, -ha, -ha (+), is exemplified in uágudaha, uakutaha *our burning* (*extensively*), in contrast to uágudu, uakutu *our burning* (*in particular*), the participial morpheme equalling zero in possessed forms after -ha except when followed by a pronominal goal. It is also seen, as opposed to the stative suffix, -gua, -kua (+), in ábunaha, abunaha *to bury*, compared with ábunagua, abunakua *to plant*, both of which have (at least in Central American) ábuna, with undifferentiated meaning, ε underlying form (unattested by Rat).

The causative suffix, -goda, -kota (+), is attested in buígoda, buíkota *filled*, from buí, buí *full*.

Further suffixial correspondences include: -bu, -bu (+) *at*, as in áudobu *at town*, áutobu *at the settlement/homestead*, from áudo *town*, auto *homestead*, etc.; -rugu, -ruku (+) *in*, as in lágurugu, lakuruku *in his eyes*, from lágu, laku *his eyes*; instrumental -gole, -kole (+), as in abuídagole, abuítakole *broom*, from abuídaha, abuítaha *to sweep*; directive -ų, -ų (+) *to* and -geę ~ -gię, -sę (+) *from, out of, by*, as in iáhaų, iahaų *hither*, from ia/iáha, iáha *here* árabugię arábsę *from or by way of the woods*, from árabu, arabu *woods*. The latter suffix is also seen in láugię, lausę *above him*, from lau, lau *on him*, and in lábugię, labusę *below him*, from lábu, labu *under him*. The locator primary suffixes, -ha, -ha (+); -ra, -ra (+); -gVta, -kVta (+); -gVra, -kVra (+); and -g(u)ia, -k(u)ia (+), may be illustrated by: lèa/líha, liha *he here—this-masc.*; iára, iara *there*; lígita, liketa *he over there—that masc.*; iagóra, iakora *yonder*; buguúia, bukuia (*as for*) *thee*, or (*it is*) *thou*. The reflexive suffix, -gua, -kua (+), is seen in lúgua/lunígua, lunikua *for or to himself*, from lų/lúni, lų/luni *for or to him*. A nominalizing suffix, -li, -li (+), is found in gumúlali, kumulali *smoke*, as compared with agúmulaha, akumulaha *to smoke*. Employment of the suffixed marker of third person plural as a pluralizer of nouns denoting animate beings is found in uorią, uorią *women or girls*, whose singular form is uóri, uóri; as well as in the irregular nibáią, nibáią *my grandchildren* or (according to Rat) *my children*, from the singular nibári, nibari.

Other examples of morpheme correspondence could be adduced, but as all isolatable recent-Dominican morphemes, with the exception of some stems, have correspondences in the Central American dialect, the above may suffice.

3. The inadequacy of the data on recent Dominican Island Carib has necessitated the omission of many items of Swadesh's basic test vocabulary from the following list. A few of these, such as the forms for *at*, *in*, *not*, will be found among the affixes in the preceding section. Some items not listed by Swadesh have been added, but none of these can be regarded as cultural for the peoples and localities concerned; nor can any borrowing between them have taken place since the Black Caribs' deportation to Central America in 1797. As many of the recent Dominican words are attested only in possessed or otherwise prefixed forms, such will be given, for both dialects, with the first singular person marker, n- *I*, *me*, *my*, followed by a hyphen. The English is followed by the Central American, and this in turn by the recent Dominican; both being given in phonemic transcription, with such reservations for the latter as have been made under 1 above.

about/upon n-úagu, n-uáku (+); *aguti* (*Dasyprocta*) agúri, píkuri (−); *all* sų, sų (+); *animal* (*domestic*) n-ilógo, n-iloko (+); *ashes* balígi, balisi (+); *back* n-anága, n-anaka (+); *bad* uríbati, ulibati (+); *to bathe* ágaua, akaua (+); *belly* n-urágai, n-urakai (+); *big* uáiri, uairi (+); *black* uríti, uiriti (+); *blood* hítao, hita (+); *to blow* áfuragua, apurakua (+); *body* n-úgubu, n-ukubu (+); *brother* (*elder*) n-íbugaią, n-íbukaią (+); *to burn* águda, akuta (+); *to chew* acágura, asakura (+); *child* iráho

(n-iráo), n-iraho (+); *cold* díliti, tíliti (+); *to come* acólora, asolora (+); *to cook* ábuaga, abuaha (+); *to copulate* aliágua, aliakua (+); *crayfish* (*river*) isúru, isulu (+); *to cut* íbiha, ibiha (+); *to dance* abínaha, abinaha (+).

day uéiu, (h)uéiu (+); *to die* áue, áuhue (+); *to dig* acíga, asika (+); *to do/make* adóga, atoka (+); *dog* áụli, aụli (+); *to drink* áta, ata (+); *drunk* (*inebriated*) bacárua, basárua (+); *dung* ídiga, itika (+); *ear* arígai, aríkai (+); *earth* múa, húa (+); *eat* áiga, aika (+); *eye* n-águ, n-aku (+); *face* n-igíbu, n-isíbu (+); *far* díseti, tiseti (+); *fat* (*n.*) agóle, akole (+); *father* n-úguci, n-úkusili (+); *fear* (*n.*) anúfude, anuhute (+); *few* míbe, mibe (+); *fighting* (*a.*) gáịgua, sibutekai (−); *fire* uátu, uátu (+); *fish* údorao, utu (+); *to fish* adíaha, atiaha (+); *to catch* (*fish*) adíga, atíka (+); *flower* íleue, íleue (+); *flowing* (*a.*) séseti, seseti (+).

foot (*feet*) n-ugúdi, n-ukúti (+); *for/to* n-úni, n-uni (+); *four* gádoro, biąmburi (−); *frog* húa, húa (+); *full* buị, buị (+); *to give* ícига, isika (+); *to go* áibuga, áiubuka/áibuka (+); *go* (*thou*): báiba, báiba (+); *let's go* káimą, káimą (+); *good* buídu, irupụ (−); *good* (*of sensory perception*) semée, semẹhẹ (+); *grass* sagádi, karau (−); *hair* n-ídiburi, n-ítiburi (+); *hand* n-úhabu, n-úhabu (+); *he* ligía, likía (+); *head* n-icígo, n-isik (+); *to hear* agąba, akąba (+); *heart* n-anígi, n-anisi (+); *here* iá/iáha, iá/iáha (+); *honey* mába, mąmba (+); *how* ída líą, itálią (+); *how much/many?* átiri, atri (+); *house* múona, muíną (+); *house* n-úbą, n-ubana (+); *hungry* (*I am*) lamádina, làmąhátina (+).

husband n-úmari, n-iraiti (−); *husband* n-úbu, n-ubu (+); *I* nugúia, nukuia (+); *jealous* iméedi, imeẹti (+); *to kill* áfara, apara (+); *kinsman* idúhe, itúke (+); *liana* míbi, míbi (+); *lightning* abírihani, abírihani (+); *long* migífe, misipe (+); *lying* (*mendacious*) marásua, marasua (+); *maize* auási, auasi (+); *man* eiéri, éieri (+); manioc gą(h)ị, ką(h)ị (+); *many/much* gíbe, kibe (+); *meat* (*portion of*) n-úi, n-úihi/n-úini (+); *moon* háti, nunụ (−); *mother* n-úgucu, n-úkusuru (+); *mouth* n-íuma, n-iuma (+); *name* n-íri, n-iri (+); *night* áriabu, ariábu (+); *nose* n-ígiri, n-isiri (+); *no!* úa, úa (+); *old* uái, uái (+); *one* ábą, abą (+); other ámu(ią), ámuią/ámią (+); *person* mútu, mutu (+).

pitiful gudémegu, kutemeku (+); *to pour out* ásera, asera (+); *put* (r)u, ru (+); *rain* húia, huia (+); *right* ríca, risa (+); *river* dúna, tuna (+); *road* óma, oma (+); *rope* fítaru, bitaru (+); *rotten* (*of wood*) áuaraha, auaraha (+); *salt* sálu, salu (+); *sea* baránа, baránа (+); *to see* aríha, ariha (+); *to sew* áhocagua, akosakua (+); *shadow* (*image, picture, reflection*) iáua, iaua (+); *short* láugua, ráuia (+?); *skin* n-úra, n-ura (+); *to sleep* arúmuga, arumuka (+); *small* (*he is*) niǫraoti, hiąti (+); *smoke* gumúlali, kumulali (+); *snake* héue, heue (+); *some* ítaga, itakara (+); *to speak* eréga, ariąka (+); *to spit* asuéra, asueha (+); *split* (*or pierced*) gúcagua, sírakua (−); *squeezed* (or tight) murú, muru (+).

star uarúguma, uarukuma (+); *it stinks* hịgiti, hịsiti (+); *sun* uéiu, (h)uéiu (+); *to sweep* abuídaha, abuitaha (+); *sweet* (*it is*) bímeti, bimeti (+); *to take* anóga, anoka *that-masc.* líra, lira (+); *there* iára, iára (+); *thirsty* magírabu, makrabu (+); *this-masc.* lèa/líha, liha (+); *thou* bugúia, bukuia (+); *three* órua, irua (+); *to tie* ágora, akora (+); *tobacco* iúri, iúri (+); *tooth* (*teeth*) n-ári, n-ari (+); *town* áudo, auto (+); *tree* uéue, ueue (+); *to turn* agíribuda, asiributa (+); *turtle* gadáru, kataru (+); *two* bíama, biama (+); *under* n-ábu, n-abu (+); *to walk* áibuga, ái(u)buka (+); *warm* (*it is, of the weather*) bacáugati, basaukati (+); *wash* acíba, asiba (+); *water* dúna, tuna (+); *we* uagía, uakia (+); *what?* ká(ta), kata (+).

when (*future*)? ídaba, itaba (+); *where?* hália, halia (+); *white* (*it is*) harúti, haruti (+); *who?* ká(ta), kata (+); *wife* n-úmari, n-iáni (−); *wind* garábali, karabali (+); *with* (*accompanying*) n-úma, n-umą/n-uman

(+); *woman* hįáru, hįaru (+); *woods* árabu, arabu (+); *work* iuádigimári, iuatakimare (+).

It may be noted that the percentage of correspondences in the above list (94%) agrees with the unit retention rate of 80% (per 1000 years) worked out for this language by Swadesh and myself, if it is presumed that the two dialects were identical as to basic vocabulary at the time of the Black Caribs' deportation in 1797, and that the latter's dialect has diverged during 150 years, that of the Dominicans for little more than 100 years (because it became extinct).

4. In both dialects there is a series of person-marked auxiliaries which are postposed to an infinitive verb, an adjective, or a locator, serving as complement; and which in part duplicate, and in part supplement the synthetic verb aspects. These are: -ba-, -ba- (+) imperfective; -ią-, -ią- (+) progressive; -a- ~ -ma-, -ha- ~ -ma- (+) perfective; -mutI-, -mutI- (+) aorist; -iabu, -iabu (+) andative (*going to*); -a- ~ -ma-, -a- ~ -ma- (+) conjunctive. The durative auxiliary, present in Central American, is not attested for recent Dominican. The imperfective auxiliary, which retains both future tense and subordinative functions in Central American, appears to have been restricted to if- and when-clauses in recent Dominican, and, unlike Central American, to have obviated the necessity for words meaning *if* and *when*; so: tikáˊ-buba utu *if you catch fish*, nibuíˊ-buba iaha *when you come here*. The aorist and perfective auxiliaries appear to have been employed, as in Central American, more particularly when a pronominal goal was to be expressed (since the person-marker suffix expresses the pronominal subject in synthetic verbs of these aspects); so rutių *they put*, but ru nhamútių *they put them*; and atokahatina *I have done/made*, but atoka nuhali *I have done it*. The conjunctive (with imperative and subjunctive functions) is, with very few exceptions, always analytical in both dialects; so (recent Dominican) atoka ba(i) *do thou (it)*! mabuįsu la *that it may not fill*.

Nominal possession is expressed in both dialects by juxtaposition; but whereas, in Central American, the possessed noun always precedes the possessor, either order seems to have been permissible in recent Dominican. So, for example, Rat gives lakosa sibui *the gommier tree* (sibui *gommier—Dacryodes excelsa*), and kiere akosa *pieces of manioc* (kiere *manioc*, the women's word for which was kąį or kąhį), and considers this last order to have been the more common. In all those of his examples in which the possessed noun precedes, it bears—analogously to the Central American construction—a third person marker referring to the possessing noun; while this is not the case when it follows the latter. In the Central American dialect, the former is the only possible order: tagóca gąį/gąhį *her-cutting(s) manioc*,—except when, as happens to be the case in this instance, there is a compound noun as an alternative form: gáįgoca *manioc-cutting(s)*. Such compounds are, however, rare.

Most adjectives function, in both dialects, only as predicate complements; although numeratives and a few others may precede nouns as attributes. The deficiency is made good by using third person aorist verbs derived from such predicative adjectives as attributes; so, in Central American, one might speak of ábą uéue uáiritu *a tree big-is-she*—i.e. *a big tree*, in contradistinction to uáiritu uéue *big-is-she tree—the tree (or wood) is big*. No such distinction appears to have been made in recent Dominican, for Rat records: uasuaha uairiti ueue *we cut down the large trees*, and uairiti liha mesu kasi liha aųli *this cat is as big as this dog*. The determiner is also placed after the noun in Central American, so that, in this dialect, the last example becomes: uáiriti mesu lèa káisi áųli lèa. Other relationships are expressed in both dialects by person-marked words, functioning as prepositions, placed before the noun, as láuba namúlę *him-beside my-*

younger-brother—beside my younger brother, lumą namúlę *with my younger brother*, lų namúlę *for or to my younger brother*, luária namúlę (*away*) *from my younger brother*, etc., the third person prefixed marker (masculine singular, feminine singular, or common plural, depending on the noun referred to) being an indispensable part of these primary words. The above examples are identical in both dialects.

Apart from such special constructions, word order is not too important (except stylistically) in either dialect; although perhaps the most usual order is: predicate—nominal subject—nominal goal. Even when these last two are present in the utterance, pronominal subject and goal may—and, whenever possible, usually are—be marked by the predicate in cross-reference. A subordinate clause usually (but not necessarily) precedes the main clause. Examples: hìlaháali pupuri amutua uaihali *Jim* he-has-perished backwash *devoured he-has-grown old Jim*—i.e. *old Jim has died* (*by being*) *sucked into the backwash*; atoka kreeti mutu abą bati *make he-wants person a shelter—a person wants to make a shelter*; iąhį nhapukasa sų níbaia *there they-hatch all my-*(*grand*)*children —all my* (*grand*)*children were born there*; nibáią sųhanų auai(ri)ta *my-*(*grand*)*children they-have-finished get-big*; nubu luba iaha, iąuąku niméętirakubátibu *my-husband were-he here, little I-will-be-jealous-of-thee*, (*if/when*) *my husband were here, I would not be jealous of thee*; nibuí-buba iaha, nariąkubatibu *when thou comest here I'll tell thee*. As far as word-order is concerned, these examples from recent Dominican do not differ in any way from Central American Island Carib.[5]

To summarize: morphology, basic vocabulary, syntax, and phonology show, in that order, decreasing degrees of sameness. It is evident that these dialects are very close together; and their differences, in the first three categories, are minimal. However, the phonology differs to such an extent, especially with regard to stress accent, that a Carib-speaking Dominican Indian of fifty years ago and a Black Carib of today would hardly understand more than an occasional word or phrase of each other's normal speech, although very deliberate articulation on either side might achieve considerable intelligibility.

[5] Compare, in the Central American dialect, súądą tadóga hįáru tùa sábų *often she-make woman fem.-this soap* (*this woman often makes soap.*) However, if a nominal subject precedes the finite verb, the latter does not take the person-marker prefix in cross-reference to it; so lúbuią adarásarubádina *its-material hindering-will-be-me* and ladarásarubádina lúbuią *it-hindering-will-be-me its-material* both may be translated by *the material for it will hinder/delay me*.

OSAGE II: MORPHOLOGY[1]

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1. Morphophonemics
2. Affixes
3. Form classes
4. Bases
5. Sample utterances

1.0. For purposes of clarity it is convenient to recognize in Osage three morphophonemes, b, g, and d[2]. Each occurs only with certain bases which will be dealt with below (**4.4**). Their distribution with such bases symbolizes that the base occurs in sequence with prefix class 20.1. of person markers, rather than with classes 20 or 10. In the following paragraphs we list the specific phoneme alternants with examples for each morphophoneme.

b is phonemically realized as /p/, g as /k/. In sequences with prefix class 20.1. the alternation formulae are the following: p- (21.1.) + b ~ p-; š- (22.1.) + b ~ šp-; thus, pašpú *I chipped it*, špašpú *you chipped it*. p- + g ~ k-; š- + g ~ šk-, as káxe *I made it*, škáxe *you made it*.

The three phonemic alternants of morphophoneme d may be stated in the following alternation formulae: p- + d ~ br-; š- + d ~ šc- followed by e or i, ~ št- followed by other vowels; ki- (prefix 41) + d ~ l-; when preceded by any other prefix or by zero, d ~ ð. Thus, bré *I went*; brúža *I washed it*; šcé *you went*, štúža *you washed it*; lúža *he washed himself* (= ki- + dúža); ðé *he went*, ðúža *he washed it*.

An alternate statement would be to list each morphophoneme in terms of its 'phonemic potential', e.g. b/p/, g/k/, d/br, c ~ t, l, ð/ and then to list distributional peculiarities and specific alternations in the same order[3].

1.1. A dash (—) is used in this paper to symbolize a morpheme boundary. Where it appears with a base, it symbolizes the exact distribution of the person marking prefix (classes 10 through 40) whenever the latter occurs in sequence with a base so marked[4]. In giving examples of utterances or partial utterances the dash will not be used to indicate morpheme boundaries. Thus, we write a- *first person singular* and -kúce *to shoot* (X base), but akúce *I shot him*; ði- *second person non-active* and nǫpé-hi *to be hungry*, but nǫpéðihi *are you hungry?*.

2.0. Osage affixes are listed in the following paragraphs, arranged in numbered classes, 10 through 60 for prefixes, 100 through 300 for suffixes.

2.1. With the exception of class 50 all prefixes express meanings of person. We distinguish prefix class 10 *non-active person markers*, marked 11 through 13, as follows—

11. ą- *first singular*
12. ði- *second person*
13. wa- *indefinite object*; class 20 *active person markers*, numbered 21 and 22, as follows—
21. a- *first singular*
22. ða- *second person*; class 20.1., alternants of class 20, numbered 21.1. and 22.1., as follows—
21.1. p- *first singular*
22.1. š- *second person*; class 30, containing a single morpheme, numbered 31—

[1] For Osage phonemics see Osage I, IJAL 18.63–68 (1952).

[2] The choice of these symbols was possible, since b, d, g are not phonemes in Osage.

[3] For the analysis of the morphophonemics of another Siouan language (Iowa-Oto), see C. F. Voegelin, A Problem in Morpheme Alternants and their Distribution, Lg 23.245–54 (1947).

[4] This device makes it unnecessary to set up a special class of infixes or to recognize open or compound bases.

31. ą- *first person plural*; class 40, *person marker supplements*, numbered 41 through 43, as follows—
41. ki- *reflexive-reciprocal*
42. wí- *first singular reflexive*
43. wi- *first singular subject with second person object, I—you*; class 50 *deverbalizers*, numbered 51 and 52—
51. wa- *nominalizer*
52. i- *instrumental*; class 60, *possession markers*, numbered 61 through 64, as follows—
61. wi- ~ w- *first singular*
62. di- *second person*
63. i- *third person*
64. ąkó- *first plural.*

All prefixes listed as members of one class are mutually exclusive. Their specific distribution will be discussed in the section on bases (under **4** below).

2.2. Suffixes are listed in three classes, verbal suffixes 100, nominal suffixes 200, and miscellaneous suffixes 300. A few morphemes of class 100 may occur in sequence with each other. Specific distributions are cited with bases below (**4**).

Suffixes of class 100 are numbered 101 through 109, as follows—
101. -ta *future*
102. -kǫ ~ -ži ~ -įke *negative*
103. -kha ~ akha *non-active predicate*
104. -pe *active predicate*
105. -pe ~ -pa ~ -apa *plural predicate*
106. -hį *hortative*
107. -ðe *causative*
108. -štą *frequentative*
109. -he ~ -ha whose meaning could not be ascertained.

Suffixes of class 200 are numbered 201 through 209 and 211 through 213, as follows—
201. -įkha *verbalizer*
202. -eka *inside, in*
203. -ci *general locative, in, at, to*
204. -wį *one, indefinite article*
205. -to *something, some*
206. -khą *from*
207. -ðe *this*
208. -eða *that*
209. -tą ~ -tąka *large*
211. -žį *little*
212. -mą *walking*
213. -xi *big, long.*

Suffixes of class 300 are numbered 301 through 304, as follows—
301. -ðe *object*
302. -xci *much, quite, very*
303. -ðįke *negative attribute*
304. -mį *first person singular, I am*

3. We recognize and define the following form classes in Osage:
Verbs (V): (1) a base X in sequence with prefix classes 10 through 40 and/or suffix class 20; (2) a base Y in sequence with suffix 201.
Nouns (N): (1) a base Y in sequence with prefix class 60 and/or suffix class 200; (2) a base X in sequence with prefix class 50.
Adjectives (A): a base Z which may occur either (1) preceded by N or (2) followed by the base -kše or (3) in sequence with suffix 103 or suffix 304.
Pronouns (Pr): a base D in sequence with suffix class 300 (minus 304).
Particles (P): a class of free forms occurring with neither prefixes nor suffixes.

4.1. X bases are generally defined by their distribution with prefix classes 10 through 50 and/or suffix class 100. Further distributional criteria permit us to distinguish several subclasses, designated Xn, Xa, Xd, Xb; we further recognize an 'irregular' subclass Xx. A description, with examples, of each subclass is given in the following paragraphs.

4.2. Bases of subclass Xn constitute a small group of which the following examples are found in our corpus: ní-ce *to be cold*, -tąhe *to be good, virtuous, distinguished*, -níe *to hurt, pain*, -talį *to burn*, nǫpe-hi *to be hungry*. Bases of this subclass occur in distribution with prefixes of class 10 and may be designated as *non-active* verb bases. Examples of such sequences are níące *I'm cold*;

ąníe *it hurts me*, nǫpéðihi *are you hungry*?, cí tálį *the house burned down*[5].

4.3. Subclass Xa comprises the bulk of all X bases in Osage. The distinctive distribution[6] which defines this subclass is with prefix class 20. This and the following subclasses Xd and Xb may be designated by the term *active* verb bases. Examples of this subclass are: -kúce *to shoot*, -nąke *to run*, -k?u *to give away*, -lépe *to vomit*, -wanǫbre *to eat something*, -wací *to dance*, -nąk?ǫ *to hear*, -xaké *to cry*, -k?į *to carry*, -k?e *to dig*, -líįka *to sit down*, -nąžį *to stand up*, -c?e ~ -c?a *to die*, -li *to come* (*home*), o-li *to dwell*, i-xa *to laugh*, á-nąk?ǫ *to listen*, ho-ce *to hunt*, a-lį *to ride* (*horse*), o-ho *to bark*, -kiu *to call*. Some examples of these bases in sequence with prefixes of class 20 are given below.

šǫ́ke ðakúce *did you shoot the dog*?, cíci anąke *I ran to the house*, káwa aðálį *you rode the horse*, íaxa *I laughed*, ok?óce ðak?é *did you dig the hole*?, pahúskaci oálį *I live in Pawhuska*, nąnúǫpa ðašóce *you smoked a pipe*, įtáci šǫke k?į *father carried the dog*, anąk?ǫ́ *I heard it*, aðánąk?ǫ *did you listen*?.

4.4. Subclasses Xd and Xb are characterized by the presence of morphophonemes d (Xd) and b or g (Xb), or a combination of these, in the base. Beyond this they do not differ structurally from subclass Xa, but their distinctive distribution is with prefix class 20.1. rather than with class 20. Examples of these bases are, for Xd: de *to go*, datą *to drink*, wadǫ *to sing*, mądį *to walk*, duze *to get, obtain*, mądǫ *to steal*, odįke *to catch*, weduwį *to sell*, duwį *to buy*, daxtake *to bite*; for Xb: ibahǫ *to understand*, gaxe *to make*, baxe *to make*, gožįka *to be unable*, bašpú *to chip*, mąbak?o *to dig the earth*, bixą *to blow*.

The morphophoneme constitutes the morpheme boundary for the distribution of Xd and Xb bases with all prefixes. The specific alternations have been described under **1** above. Examples of this distribution are listed below.

bré *I went*, ní ðátą *he drank water*, cíci šcé *you went to the house*, hóto obrį́ke *I caught some fish*, olį́ke *catch*! (= ki + odįke), káwa wéštuwį *did you sell the horse*?, šǫ́ke ąðaxtáke *the dog bit me*, káwa nǫ́pa mgðǫ́ *he stole two horses*, hó bráce *I ate the fish*, štúža *you washed it*, lúža *he washed himself*, péce škáxe *did you build the fire*?, waléze páxe mįkše *I'm writing a letter*, įpahǫ mąží *I don't understand*, íšpahǫ *do you understand*?, žąc?é špašpú *you chipped the log*.

A small number of bases may be analyzed as combinations of several subclasses, such as Xa with Xd or Xd with Xb. Examples are alǫ́brį (-lǫdį) *I'm drunk*, ðahíšta (-hida) *did you swim*?, niužó hiðá *he swam the Neosho R.*, káwa kǫ́bra (gǫda) *I want a horse*, ní škǫ́šta *you wanted water*, šǫ́ke kúce kǫ́ða *he wants to shoot the dog*.

4.5. Subclass Xx includes a limited number of irregular bases, which cannot be analyzed like the bases discussed above; hence, a complete listing of these forms is here included. Wherever possible we list complete paradigms, preceded by the numerals 1. for *first person singular*, 2. for *second person*, 3. for *third person*, and 4. for *first person plural*.

1. ~ 3. iðá 2. íða *to see*; 1. iðáðe 2. íðaðe 3. íðe 4. ąðą́ða *to see*; 1. íwi 2. iðá 3. íe *to speak*; 1. épše 2. éše 3. é *to say, talk*; 1. žą́mi 2. žą́mišce 3. žą́že *to think*; 1. pšíe 2. kšíe *to have been there*; mąží *I don't* was given only for the first person.

The irregular base -kše, 1. mį́kše 2. nį́kše 3. į́kše *to be* has a special distribution, which may be summarized as follows: in the sequence Z + -kše or P + -kše it has meaning of *predicate*, as c?áke mį́kše *I'm old*

[5] The limited membership of this subclass is, in the writer's opinion, a very recent development in the history of Osage. It is at least in part due to an increase in the technique of the sequence Z-base + -kše, a technique which may have converted many Xn bases into Z bases.

[6] The term 'distinctive' is here applied to the distribution which serves to distinguish one subclass from all others.

(Z + mɭkše), omą́ɭke lébrǫpa mɭkše *I'm 20 years old* (P + mɭkše), céska hówaɭke ɭkše *where is the cow?*, omą́ɭke hána nɭkše *how old are you?*; as a postposition following a verb it has the meaning of *durational aspect*: bré *I go, went*, bré mɭkše *I'm going*, bréta mɭkše *I'll be going*, hóto obrɭke mɭkše *I'm catching some fish*.

4.6. In the following paragraphs we summarize all possible sequences for X bases. Xx bases, which have been listed above (**4.5**), are not included in this summary.

All X may occur as free forms; the meaning of this basic sequence is *third person*. ðé *he went*, kúce *he shot it*, níce *it's cold*, páxe *he made it*, lǫ́ðį *he's drunk*.

All X may appear in sequence with prefix 31: ąkúce *we shot him*, ąnąk?ǫ́ *we heard it*, ąðá *we went*, péce ąkáxe *we made a fire*.

The distinctive distributions for the subclasses are: 10 + Xn—nǫpéąhi *I'm hungry*, 20 + Xa — ðanąk?ǫ́ *you heard it*, 20.1 + Xd — mázeska štúze *did you get the money?*, káwa brúwį *I bought a horse*, 20.1. + Xb — waléze páxe *I wrote a letter*, íšpahǫ *you understand*, níto škǫ́šta *you wanted some water*.

Other sequences are: 10 + 20 + X — ąðanąk?ǫ́ *you heard me*, waðakúce *you shot something*, 10 + 30 + X — ąðitaphókhe *we hit you*, ąwáðuwį *we bought something*, 20 + 30 + X — ąðakúce *you shot us*, 40 (+20) (+30) X — níkakha kitapók?e *the man hit himself*, kikúce *they shot each other*, káwa kíbruwį *I bought him a horse*, káwa ąkíðuwį *we bought him a horse*, sítui wíkuce *I shot myself yesterday*, wikúceta mɭkše *I'm going to shoot you*, wikíuta *I'll call you*, šǫ́ke wik?ú *I gave you the dog*.

50 + X — waðak?éðe *kindness* (base ðak?e-ðe), mąhkąsape iðátą *coffeecup, to drink coffee with* (base datą). It is obvious that prefix class 50 and suffix class 100 are mutually exclusive.

Class X bases, whether or not preceded by prefix classes 10 through 40, may occur in sequence with suffix class 100. In listing possible sequences we restrict ourselves to those morphemes which are not mutually exclusive with all other suffixes in this class.

X + 101 + 104 — aðétape *he'll leave*, X + 101 + 105 — aðátapa *they'll go away*, X + 102 + 104 — ðacéžipe *she didn't eat it*, X + 107 + 101 + 104 — šǫ́ke c?éðetape *he'll kill the dog*.

The exact relative distribution of the alternants of 102, -kǫ ∼ -ži ∼ -ɭke *negative* is not clear from our corpus. Moreover, we have only three examples of the two alternants of suffix 109, -ha ∼ -he: táte éha *what did he say?*, mąbrɭhe *I'm walking*, ak?ɭhe *I carry something*.

4.7. For greater convenience of statement Y bases may be treated under three distinct headings: 1) kinship terms, 2) the base -ta, 3) all other Y bases. Of these three subtypes only the latter appears in sequence with suffix class 200; the two former may appear in sequence with suffixes 103 or 105.

4.8. Kinship terms are structurally defined by the fact that they may, and usually do, occur in sequence with the possessive prefixes, class 60. Examples are—wicíko *my grandfather*, ðíko *your grandmother*, wicími *my father's sister*, winážį *my mother's sister* (*little mother*), wisǫ́ka *my younger brother*, wižį *my older brother*, witą́ke *my older sister*, wɭcéki *my mother's brother*, ðitą́ke *your older sister*.

In addition to being marked by a possessive prefix a kinship term is often followed by the appropriate form of the base -ta. A few kinship terms, such as ɭtáci *father*, iná *mother*, níka *man, husband*, wak?ó *woman, wife* only appear followed by -ta, never in sequence with prefix class 60. (The informant vigorously denied the possibility of such formations as wiwak?ó *my wife*.) The peculiarities of the base -ta are described in the next paragraph (**4.9**).

4.9. The base -ta *possession* always occurs in sequence with one of the prefixes of class 60. Moreover, it occurs in the utterance only preceded by another Y base. Thus, šǫ́ke wíta *my dog*, hǫ́pe ðíta *your shoes*, but also ɭtáci wíta *my father*, iná ðíta *your*

mother, káwa íta *his horse*, cí íta *his house*. There is no doubt that a certain amount of emphasis is implied in this type of sequence; ịtáci káwa ąk?ú *father gave me a horse* means, of course, *my father*. At times, however, -ta is obligatory without being emphatic: ịtáci íta káwa ąk?ú *his father gave me a horse*[7].

4.10. Y bases not treated under **4.8** or **4.9** above, i.e. most Y bases, may occur in sequence with suffixes of class 200. Suffixes 212 and 213 seem to be primarily derivative and appear in our corpus only in formation of names; thus, šǫ́kemą *Horse that Walks*, ištáxi *Long Eyebrows*, *White Man*.

4.11. Z bases or adjectival bases, may occur in the utterance in any one of the following ways: in isolated position, as píži *it's bad*; preceded by another Z base, as wálį píži *it's very bad*; preceded by a noun (Y base), as céska húheka *the sick cow*, cí lą́ðe *the big house*, šǫ́ke c?éka *a mad dog*; in sequence with the predicative or plural suffixes 103 or 105, as céskakha húhekakha *the cow is sick*, ịtácikha c?ákekha *father is old*; followed by the appropriate form of the Xx base -kše, as húheka míkše *I'm sick*, c?éka ịkše *he's crazy*.

Our corpus contains one instance of suffix 304, -mį, which was given as an alternate of mịkše in the form c?ékamį *I'm crazy*. Corresponding forms for the second or third persons could not be elicited. In all other cases the informant preferred the use of the base -kše[8].

4.12. A small number of morphemes may replace nouns (Y bases) in any given utterance, without, however, having the structural characteristics of Y bases. Such morphemes may be conveniently grouped together as D bases. Included in this class are the independent pronouns wí ~ wíe *I*, ðí ~ ðíe *you*, é *he, she, it*, tó ~ tóa *that one, he, she, it*, ą́kó ~ ąkóa *we, us*, nąkwį *both*; and a group of demonstratives, ecí *there, then*, kóci *then, since then*, kóta *that there*, ekǫ́ *like this*, ðe ~ ðéa ~ ðíe *this here*, ðekǫ́ci *now*, ðeká *right here*[9].

4.13. Class D bases may occur in sequence with suffixes 301 through 303. tó ~ tóa and the demonstratives may also occur in sequence with suffixes 103 or 105. Examples of such sequences are given below.

D + 301 — tóade akúce *I shot him*, D + 303 — mą́zeska ðíðịke *don't you have money?*, D + 302 — tóakha íhǫ ekǫ́xci *he looks a lot like his mother*, D + 103 — šǫ́ke ðékha šǫ́ke kótakha laxpá *this dog bit that one*, šịtožį ðékha páži ðábrį wítakha *this boy is my third child*.

Our corpus contains a few instances of D bases in sequence with locative suffixes of class 200: ðekákhą *from here*, ðekócikhą *from now on* (ðekóci *now*), cíci kótaci mą́ðį *go to that house there*.

4.14. Particles (P) include all numerals, adverbs of time, and other similar adverbial forms. By definition they do not occur in sequences with affixes. A small sample of particles is listed below.

wịxci *one*, nǫ́pa *two*, ðábrį *three*, tópa *four*, sáta *five*, šápe *six*, pégpa *seven*, kíatópa *eight*, lébrą cewịke *nine*, lébrą *ten*, lébrǫpa *twenty*; hówaịke *where?*, sítui *yesterday*, kasịte *tomorrow*, táte *what?*, hą́kaži ~ nąkaži *no*,

[7] It is interesting to note here that the distinction between alienable and inalienable posession, which is marked in many Siouan languages (such as Mandan and Dakota), seems to have disappeared in Osage. Historically -ta is the marker of alienable possession, while prefix class 60 seems to be associated with more permanent affiliation, as may still be seen from their distribution with kinship terms. However, neither informant made such a distinction, nor did they quite understand what was meant, when questioned.

[8] It is quite possible that at an earlier stage of the language Z bases did not differ structurally from Xn bases but were part of the inactive verb group. Historically, adjectival and non-active verb bases seem to be identical in the Siouan languages; see also footnote 5 above.

[9] It is no longer possible to distinguish between these demonstratives on the basis of visible versus invisible objects. That such a distinction must at one time have existed is evident from an examination of such forms in other Siouan languages. Cp. also the pertinent paragraphs in Siouan, BAE-B 40.875–966 (1911).

hówe *yes (man speaking)*, ąhą́ *yes, (woman speaking)*, hákhąte *why?*, pé *who?*, ékiuįka *don't!*.

5.0. In the paragraphs below we list sample Osage utterances, in order to show possible constructions and the deployment of form classes in such constructions. No attempt at an exhaustive treatment has been made; until greater amounts of text materials become available the listing below remains a sample of possibilities.

5.1. DEFINITIONS. For purposes of utterance analysis we redefine Osage morphemes[10] as follows: X = V (verb); Y = N (noun); Z = A (adjective); D = Pr (pronoun); particles are designated as P. These definitions apply to bases with or without affixes, with the exception of prefix class 50 and suffix 201. which see below.

50 + X = N_1 (verbal noun); any base + 201 = V_1 (verb derived from base other than X). Thus, waðak?éðe *pity* is N_1 (wa- *nominalizer* + ðak?éðe *he pities him*); wapíįiha *he's bleeding* is V_1 (wapí *blood* + -įkha *verbalizer*).

V + -kše = V_2, bréta mįkše *I'll be going*; A + -kše = V_3, húheka mįkše *I'm sick*; N + -ta = N_2, šǫ́ke wíta *my dog*; N + A = N_3, cí žúce *the red house*.

In some utterances suffixes 103 -kha, 104 -pe, or 105 -pe ~ -pa ~ -apa, all of which have a generally predicational meaning, are affixed to several bases in the utterance (P excepted), thus functioning as a discontinuous morpheme. We therefore recognize an element p (predication) to be used to symbolize utterances of the following type: šǫ́kekha c?ékakha *the dog is made*, symbolized (NA)p, or tóape aðápe *they left*, symbolized (PrV)p. This operation permits us also to distinguish between such utterances as cí lą́ðe *the big house*, which is N_3, and cíakha lą́ðekha *the house is big*, analyzed as (NA)p. (Note: p symbolizes only the discontinuous morpheme of predication in a given utterance; a single occurrence of the above-named suffixes will not be specially indicated. Thus, aðápe *they left* is analyzed as V).

Sample utterances and their analyses are listed in the following section (**5.2**).

5.2. The minimum utterance in Osage may consist of a single element; V—akúce *I shot him*, N—mą́šcįke *a rabbit*, witą́ke *my older sister*, A—píži *it's bad*, Pr—tóa *that one*, P—hákǫ *why?*, ékiuįka *don't!*.

Longer utterances are: NV—įtáci ðéta *father will leave*, ní brátą *I drank water*.

PV_2—hákhąte šcéta nįkše *when will you be going?*, hówaįke šcé nįkše *where are you going?*, hówaįke ðé *where did he go?*

PrV—tóakha acípe *he arrived*, tóaðe akúce *I shot him*

(PrV)p—tópae aðápe *they left*, tóakha aðékha *he left*, tóakha aðétakha *he'll go away*

(PrA)p—tóakha c?ékakha *he's crazy*

NNV—šǫ́ke įtáci mąbró *I stole father's dog*, įtácikha níkhą brúze *I pulled father from the water*, įtáci hǫ́pe ąk?úpe *father gave me the shoes*, NVV—ważáže íe kǫ́žįka *he can't talk Osage*, owítawį kǫ́ðakha luzážipe *he wanted a car (but) didn't get it*

NN_2V_1—įtácikha cí wíta ecíįkha *father is in my house*

N_2PV_2—cí ðíta ecí pšíta mįkše *I'll come to your house*

PPV_2—kasíįte ši acíta mįkše *I'll come back tomorrow*

PPrV—sítui ðíe ąðakúce *you shot me yesterday*

PrVV—tóaðe ðakúce c?étakha *if you shoot him, he'll die*

NVA—ważáže íe píži *he talks Osage badly*

PrAV—tóakha c?éka žą́mi *I think he's crazy*

PrV_3V—díe píži nįkše žą́mi *I think you're wicked*

NVNPr—ważáže íekha pą́ke ekǫ́ *he talks Osage like a Ponca*

NNPrV—níka wak?ó nąkwį aðápe *the man and the woman both went away*.

In some utterances the form of predication

[10] This is in part a summary restatement of the form class definitions, as given in **3** above.

is difficult to symbolize with accuracy; thus, tóakha wažáže íe kǫ́ðakha *he wants to talk Osage* could be symbolized [Pr (NV) V]p, with the understanding that parentheses within brackets are not affected by information outside the brackets. However, it may be more practical to summarize all utterances of the type wažáže íe kǫ́ðakha under a separate symbol, say V_4. The problem is identical in wak?ókha wacú óhǫkha *the woman bakes bread*, which may be symbolized [N (N) V]p.

As a final example we apply our analysis to a longer utterance, taken from a text: šǫ́ke wíta važįpíži mįkše mą́šcįke žą́c?é écikhą adápe *I was angry at my dog (because) the rabbit escaped from the log*. According to our analysis this N_2V_2NNPrV. It would be more practical to analyze two utterances here, N_2V_2 through mįkše and NNPrV for the remainder of the sentence. This would be logical especially since either part could stand alone as an utterance. The next problem would then be to analyze the mechanics of compounding of simple utterances. Such an analysis should be possible with the aid of mechanical recordings, where patterns of stress and intonation can be observed.

THE PROTO-GULF WORD FOR *LAND* (WITH A NOTE ON PROTO-SIOUAN)

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1. Introduction
2. Proto-Muskogean
3. Proto-Gulf
4. Proto-Gulf compared with Proto-Siouan

1. In a previous paper entitled The Proto-Gulf Word for *Water*[1] some preliminary evidence for the Gulf stock (comprising Muskogean plus Natchez, Tunica, Chitimacha, and Atakapa) was presented. In the present paper some additional evidence is set forth having as its focus the Proto-Gulf word for *land*. And, just as in the previous paper it was possible to compare the Proto-Gulf reconstruction for *water* with the Proto-Siouan one for the same word and thereby arrive at a Proto-Siouan-Gulf reconstruction having a greater time depth, so in the present instance it turns out to be possible to do the same thing with the two proposed reconstructions for *land*.

2.1 The Muskogean words for *land* are listed below followed by a proposed reconstruction.[2] Choc. yakni *land, ground, earth*; Ala.-Koas. iha·ni ~ ihan- (combining form); Hitch.-Mik. yakn-i; Cr. i·kaná ~ kan- (combining form). Reconstructed Proto-Muskogean: *ihakanika.

This particular PM reconstruction has been one of the most difficult of all to work out. It was arrived at only after a number of others had been posited and then discarded as being inadequate. Of all those that have been posited, this is the only one which satisfactorily explains every unique feature found in such divergent forms as Choc. yakni, Ala.-Koas. iha·ni and Creek i·kaná. The necessary explanations are given for each language in the paragraphs which immediately follow (**2.2** to **2.5**).

2.2 Choc. yakni is < PM *(i)hak(a)nik(a) with syncope of alternate vowels; cf. Choc. tuklu *two* < PM *h(u)tuk(u)lu (Ala.-Koas. tuklu; Hitch. tukl-an *two*, kul-apa·kin *seven*; Cr. hukkul-íta *to get to be two*, kul-apâ·kin *seven*).[3]

The initial *ih of PM *ihakanika is directly attested only in Ala.-Koas. iha·ni. But indirect evidence is also found in Choc., since PM *h after *i frequently > Choc. y, e.g. PM *nihaka (or possibly, *nihak^{w}a) *fat, grease* > Choc. niya; cf. Ala. niya, Koas. niha, Hitch.-Mik. ni·h-i, Cr. nihá·. In the same way PM *h after *u may > Choc. w, e.g. PM x^{w}uhi/u *bee* > Choc. fuwi; cf. Ala.-Koas. fuhu, Hitch. huf-i (showing metathesis), Cr. fu· < earlier *fuhu.

The final k of PM *(i)hak(a)nik(a) is lost in Choc. yakni *land* just as it has been lost in Choc. niya *fat*. Such a k is sometimes preserved in Choc., e.g. nittak *day* < PM *nihtaka. The conditions for its loss or retention are not yet fully understood. Evidence for the k comes from Creek, as shown below (**2.5**).

2.3 The Hitch.-Mik. word yakn-i contains a noun suffix -i unconnected with the fourth vowel of the prototype word. Otherwise the development of this word is the same as in Choc., as discussed above.

2.4 Ala.-Koas. iha·ni is < PM *ihakanika with contraction of the *-aka- group to -a·- and loss of final *-ka. The contraction of *-aka- to -a·- may be conditioned by the following nasal. Note that Choc. and Hitch.

[1] Haas, The Proto-Gulf Word for *Water* (with Notes on Siouan-Yuchi), IJAL 17.71–79 (1951).

[2] The Choctaw, Alabama, Koasati, Hitchiti, and Creek words are taken from the writer's field notes.

[3] Haas, Classification of the Muskogean Languages, in Language, Culture, and Personality, ed. by Leslie Spier, pp. 41–56 (1941). Discussion of alternative vocalic syncope is on p. 53.

-Vk- followed by a liquid or nasal regularly corresponds to -V·- in Ala.-Koas. and in Creek, e.g. Choc. lakna, Hitch. lakn-i, Ala.-Koas. la·na, Cr. la·n-i· < PM *lakna *yellow*.[4]

The Koas. combining form ihan- (a shortened form of iha·ni) is used in initial position in compounds, e.g. ihancayha *hill* (< ihan- *land* + cayha *high*).

2.5 Cr. i·kaná is < PM *ihakanika with contraction of initial *iha- to i·- and of final *-ika to -a·, later shortened to a. Other evidence showing that PM *V¹kV² contracts to Cr. V·[2] is given in a previous paper,[5] and some of the conditions under which such a vowel can then be shortened are also set forth in the same paper. Although Creek is the only language which contains evidence for the final *-ka of PM *ihakanika, it is necessary to assume the presence of this final in PM in order to account for the final a of Cr. i·kaná.

The Cr. combining form kan- (a shortened form of i·kaná) is regularly used in initial position in compounds, e.g. kanhálwi *hill* (< kan- *land* + hálwi *high*).

3.1 The reconstructed PM form and the cognates found in the remaining Gulf languages[6] are listed together below and followed by a proposed Proto-Gulf reconstruction. PM *ihakanika *land, ground, earth*; Nat. wi·; Tun. háli; Chit. ney; At. ne. Reconstructed Proto-Gulf: *ihaγ^{w}añiγa.

3.2 If Nat. wi· *land* is cognate with the other forms (and I am inclined to believe that it is), it is assumed to have come from PG *(iha)γ^{w}añi(γa) with loss of the parenthesized elements. The labialized velar *γ^{w} is set up to account for Nat. w. A labialized velar stop cannot be assumed, since it has already been shown that PG *k^{w} > Nat. k^{w} (before non-rounded vowels) or k (before rounded vowels), e.g. PG *(nuk)k^{w}ayti *neck* > Nat. k^{w}aht, PG *ak^{w}ini *water* > Nat. kuN.

The long i· of Nat. wi· is assumed to be a contraction of *-añi. A virtually parallel instance is seen in Nat. hi· *squirrel*; cf. PM *ix^{w}aNi/u *squirrel*.

3.3 Tun. háli *land* is < PG *(i)haγ^{w}añi-(γa). The combination *aγ^{w}a may have contracted to a in pre-Tunica, later becoming shortened to a, since there are no long vowels in modern Tunica.

PG *ñ is set up to account for Tun. l where other Gulf languages have n. A parallel instance is Tun. hálu- *under* (postpositional and adverbial stem) < PG *ñu *under, below*; cf. PM nuta, Nat. ʔino·, Chit. nuku, At. ne.[7]

3.4 Chit. ney is assumed to be from earlier *neyV, prob. *neya; otherwise y in final position would presumably have > h in line with what is true of other sonorants in final position.[8] Earlier *neya is < PG *(ihaγ^{w}a)ñiγa. PG *γ > Chit. y, perhaps only after a front vowel. It is not at present possible to determine whether Chit. e in ney calls for a reconstruction having PG *e in place of *i, but for the present it is assumed that PG *i has been lowered before Chit. y.

3.5 At. ne shows a development similar to that in Chit. (**3.4**) except that it lacks y. Swadesh reconstructs Proto-At.-Chit. *ney.[9]

4. The words for *ground, earth* taken from the more important Siouan languages are given below followed by the reconstruction

[4] Ibid., p. 48, Table 8.

[5] Haas, On the Historical Development of Certain Long Vowels in Creek, IJAL 16.122–125 (1950).

[6] Natchez and Tunica words are taken from the writer's field notes; Chitimacha from Swadesh, Chitimacha Vocabulary (unpublished ms.); and Atakapa from Gatschet and Swanton, A Dictionary of the Atakapa Language, BAE-B 108 (1932).

[7] In Phonologic Formulas for Chitimacha-Atakapa (IJAL 12.113–126, 1946), Swadesh compares Chit. nuku *back* with At. šuk *back* and reconstructs *łuku, stating that Chit. is perhaps from *n-łuku (no. 160, p. 129). The comparison of Chit. nuku with the other Gulf words shown here seems much more plausible to the present writer. At. šuk *back of*, on the other hand, may very well be connected with Nat. ʔisus~ ʔusus *back* (and also possibly with Tun. -šíra *back*) and therefore unconnected with Chit. nuku.

[8] Swadesh, Phonologic Formulas . . . , p. 117.

[9] Ibid., no. 72, p. 126.

worked out by Wolff.[10] Bil. ma ~ amá ~ mą *ground, earth*; Ofo ámą; Tut. ama·i ~ ama·ni; Os. mǫ̨ka; Dak. mą; Winn. mą; Man. mą?ąku·šta *in the earth*; Čiw. maha; Hid. awá. Reconstructed Proto-Siouan: *amą́.

For the sake of comparison with Proto-Gulf, the Tutelo word ama·ni may be of considerable importance, since it may point to a PS reconstruction *amą́ ~ amáni. This in turn compares very favorably with PG *(ih)aγʷañi(γa).

Note particularly that PG *γʷ corresponds to PS *m when this is followed by n in the next syllable and that this is an exact parallel to the correspondence between PG *kʷ and PS *m in PG *akʷini *water*, PS *miní *water*.[11] Attention should also be drawn to the fact that the difference in stress between PS *amą́ ~ *amáni *ground* and PS *miní *water* accounts for the loss of the final syllable ni in the PS variant *amą́ (compensated by the nasalization of the preceding vowel) as against the retention of this syllable in PS *miní *water*.[12]

[10] Hans Wolff, Comparative Siouan II, IJAL 16.113–121 (1950); these forms are given on p. 116.

[11] The Proto-Gulf Word for *Water*, p. 78.

[12] This shows the importance of stress for Proto-Siouan reconstructions and also, incidentally, appears to attest the correctness of the position of the stress as reconstructed by Wolff in these two words.

UNAALIQ AND PROTO ESKIMO V: COMPARATIVE VOCABULARY*

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8. Besides setting forth the Unaaliq material obtained from Mr. Andrews, the present vocabulary aims to give the range of variant forms taken by cognates in the different dialects of Yupik and Inupik Eskimo. Reconstructions of the protype forms in ancient Yupik (Y) and Inupik (I) as well as in Proto Eskimo (P) are made where possible. The adequacy of these reconstructions is limited by the fullness and accuracy of the data and by our present understanding of Eskimo phonologic developments.

To the extent possible we give the cognate forms in all available Yupik dialects, including Unaaliq-Nunivak-Kuskokwim and Siberia, and in four key Inupik dialects, namely Wales, Barrow, Mackenzie and Greenland; these dialects are indicated by their initial letters. When cognates in these Inupik dialects are lacking, forms from nearly identical dialects may be taken, especially King Island (Ki) in place of Wales, Inglestatt (In) for Barrow, Coronation (C) for Mackenzie, Labrador (L) for Greenland.

Sources for the dialects other than Unaaliq are those listed in the bibliography (IJAL 17.66). Unless otherwise indicated Kuskokwim forms are from Hinz, and other dialects are from Jenness' Comparative Vocabulary except that additional Greenland forms have been taken directly from Kleinschmidt's Ordbog. Readers consulting Jenness may sometimes have difficulty in locating the entries; we therefore point out that the i-phoneme and the a-phoneme are sometimes listed there as e depending on phonetic surroundings, that the leading entries are usually in the Barrow form, and that words are sometimes found as sub-entries under unexpected roots.

We have attempted to correct phonetic errors and to resolve ambiguous writings, on the basis of internal or comparative evidence. We give prior listing to the presumed correct form but show the actually recorded form in parentheses immediately after. The phonetic symbols of the various sources have been made consistent and phonemic. Non-phonemic details are shown (in parentheses) only where the phonemic interpretation is in doubt. Final k q in Jenness' Nunivak material have been corrected to x χ in accordance with the clearly marked Nunivak pattern; since Jenness obtained his Nunivak along with Inglestatt from a native of the latter place, it is evident the writing of stops in final position represents an inmixture of Inglestatt phonetics in what appears to be in the main a reliable rendering of Nunivak.

Verbs are generally shown in their stem forms, marked by hyphen at the end, nouns in their independent form, without hyphen. Vowels i or a are marked with two dots over them (ï, ä) if they are known to represent the variable morpho-phoneme (see **3.1**). Ordinarily the first-listed form is sufficient to indicate the manner in which derivatives and the inflectional paradigm will be formed. However, in addition we give certain important paradigmatic forms if available: the plural (in -ït) and dual (in -ïk) of nouns, the third singular unipersonal (in -uq) or bipersonal third-third (in -aa) of verbs; or, lacking the third person, we give the first person unipersonal (in -a or -ŋa) or the first-third bipersonal (in -aqa). These paradigmatic forms are given without translation. Any others are translated.

The alphabetic arrangement attempts to group phonemes which may interchange in the phonology of Unaaliq. Single and double phonemes are put together, and likewise

* For Unaaliq and Proto Eskimo I, II, III, IV see IJAL 17.66–70, 18.25–34, 69–76 and 166–71.

stops, spirants and continuants. The alphabetic sequence then is as follows: i-ii-ï-ä, a-aa, u-uu, j-jj-s-ss, r, p-pp-v-vv-f-ff, m, t-tt, n-nn, l-ll-ɬ-ɬɬ, c, k-kk-ɣ-ɣɣ-x-xx, ŋ-ŋŋ, q-qq-ʀ-ʀʀ-χ-χχ.

ii *eye*. NK ii, S ija (Bogoraz p. 111, Jenness ii), WBM ijï, G iʃï, Y ijä, IP ijə.

ippiaq *score*, malʀuk ippiaq *forty*, malʀuk ippiaq qulnik *fifty* (*two score and ten*). (-iaaq). N ippiaχ, K ippiat, W ivia, In ipiaq, Y ipiaχ, I ipiaq, P ipiaʀ.

ivvuu-nïq *piled-up ice*, *iceberg*, ivvuunʀit. W iunïq, B ivunïq, I ivunəq.

ivjiq *rain*, *to rain*, ivjiχtuq. (ivzuk, ivziχtuq). W ivʀi-nïq (ivʀanaq), YIP ivjïʀ-.

ima *it's gone*. BMG ima *thus*.

immaaŋaq *small black fish*.

imaq *contents of container*. W ima, KBMG imaq, Y imaχ, I imaq, P imaʀ.

imaq *sea*; imaχ-pik *sea*, *ocean*, -t. SWBMG imaq *salt water*, *water*, *large lake*, *sea*, Y imaχ, I imaq, P imaʀ; K imaχpik. -pik *real*.

imaχpi-nʀaq *small whitefish*. -nʀaq *small*.

imaʀ-miutaq *mink*. -miutaq *belonging to*.

itï- *deep*, ittuq. N BMG itï-, Y itï, IP ətə.

itiɣaq *foot*. (-ʀaq). KS WM itiɣaq, BG isiɣaq, Y itiɣaχ, I itiɣaq, P itiɣaʀ.

itʀmik *kick*. Perhaps itiɣamik *with the foot*.

itχatï- *shallow*, itχatuq.

inaʀ- *lie down*, inaχtuq. K inaʀ-, W inna-, MG innaʀ-, Y inaʀ-, IP innaʀ-.

inu- *push*, innuuq. N inu- (nnua).

iɬɬi *he*, *she*, N iɬɬi *one or another*, K iłə-, S łŋa *he* (Bogoraz), Y ïli-.

illiŋuk *birch*, -t, illiŋuuk. K iliŋut *birches*.

ilasqitï- *cruel*, ilasqituq. (-taq). Compare I ila- *companion*, *friend*, C ilannaqtuq *he is friendly*, C ilannaituq *he is angry*, *unfriendly*.

illanquciq *porcupine*.

ilaaliutï- *mix*, ilaaliutuq. K ilaliutï-; G ilaɣ-, B ilaʀ- *tangled*, P ila-.

iɬaaquq *brain*. N łaqχu, S ilaqquq, Y əlaquʀuχ (?).

ilu-kłiq *underwear*, -łit, -łiik. S ilulliq *inside coat*; KSW ilu-, BMG iluk *interior*, YIP iluɣ-.

iɬciaq *belch*.

ikkii *dirty*. K ikiq *something bad*, *dirt*, N ikalliʀia *is dirty*, S ikaa *dirt*.

iɣï- *thaw*, *melt*, iɣɣuq.

ïɣï *swallow*, iɣɣuq. N ɣɣa *swallows it*, BG ii-, W iui-, C iɣa-, Y ïɣï-, IP əɣə-.

ikajuʀ- *help*, ikajuχtuq. KBC ikajuʀ-, G ikiuʀ-, YIP ikajuʀ-.

ikuujik *elbow*. N ikuujix,,S ikujik, W iɣusik, BMG ikusik, Y ikujix, I ikusik, P ikusiɣ.

iɣɣuk *testicles*. (iʀʀuk). N iɣɣux (Rasmussen ixuk), Ki iɣʀuk, G iɣʃuk, Simpson iɣjuk, Y iɣɣux, I iɣjuk, P iɣjuɣ.

ixtï- *fall*, *throw*, ixtuq, ixtaa. NKS iktï (N xxittuχ), W iuitï-, BMG iɣitï- *throw away*, Y ixtï-, IP iɣətə-.

ikχitï- *few*, ikχitut *they are few*. (ikx-, ikχ-). K ikχitï-, C ikiɣli-, G ikiɣ-.

iŋʀiq *hill*, *mountain*, -t, -k. W iʀʀiq, In iʀiq, Y iŋʀiχ, I iɣʀiq, P iŋʀiʀ.

iŋqaaq *smoke tobacco*.

iiʀ-, *hide*, iiχtuq. NK iiʀ-, WBM iji-, G iʃiʀ-, Y iiʀ-, IP ijiʀ-.

ïʀï- *wash*, iʀʀuq, ʀuuʀï- *wash it*, ʀuuʀaqa. K Y ïʀï-.

iqaałuk *tomcod*. (-q). N iqaałuaχ (Rasmussen -q), S iqałłuk, W iʀalluk, BMG iqaluk, Y iqałux, I iqaluk, P iqałuy. Alternate form P iqałłuɣ reflected in SW.

iqaałux-pik *trout*. -pik *genuine*. W iʀalu-vik, BM iqaluk-pik.

iqaałux-paq *herring*. (ikałłuχpaq). -paq *large*.

iʀaaluq *moon*, *month*, iʀaaluɣni *for two months*. K iʀaaluq, S iʀaluq, Y iʀaluχ.

iʀu *leg*. NK Y iʀu. Perhaps cp. C iiɣu *flesh and imbedded sinew of caribou leg*.

iχtï- *day comes*, iχtuq. KS Y iχtï-.

iʀnïq *day*, iʀinʀit, iʀinʀik, stem iʀï-nïʀ-. N iʀniχ (Rasmussen), KS iʀniq (S Xwaŋkuta aʀ-), Y iʀï-nïχ.

iʀniχ-paq *today*. K iʀniχpak *today*, *all day*. -paq *large*.

aijai *almost*

aitauʀ- *yawn*, aitauχtuq. (-xtuq). S aitauʀ- (Jenness iataʀ-), B aitsauʀ-, WC aitauʀ-, Y aitauʀ-, IP aittauʀ-.

aiɣ- *dig*, aixtuq.

aixaq *finger*; aixat *hand* (*fingers*). S aixat,

iixa (Xwaŋkuta ixa), WBM aiγaq, G aγʃaq, Y aixaχ, I ajγaq, P ajəsγaʀ (?).

au-jaʀ- *bleed*, aujaχtuq. See auk.

auk *blood*. N aux, S WBMG auk, Y aux, I auk, P auγ.

asiγ- *good, kind*, asixtuq; assiitï- *bad*, assiituq. (aʃʃiituq). K asiʀ- (aʃiʀ-), Y asiʀ-; N assitï-, K assiitï- (aʃiituq), W aziu- (azz-), BG asiu-, Y asiitï-, I asiu- *bad*; P asji (?).

ajaγ- *go, leave*, ajaxtuq, NK Y ajaγ-; cp. BG ajaγ- *push something, launch a boat*.

ajγuʀakinʀiitï- *believe*, ajγuʀakinʀiitaqa.

aajγaaq *glove*, -t, -k. S iixaaq. Cp. aixaq.

ariʀaa *pretty! good!* BM ajiγa *splendid, excellent*. See asiγ.

apitï- *ask*, apituq. N apitï-, K aptï-, W aviqsu-, BMG apiʀ-, Y apïtï-, IP apə-.

avik *half, to divide*. NK BMK aviγ-, W auiγ-, YIP aviγ-.

apa *grandfather*. BM aapa *father*, W avaak *grandparent*.

avvauʀ- *forget*, avvauχtuq. (avvaauχtuq). KS avauʀ-, Y avauʀ-.

avaajaq *branch, limb*, -t, -k. K avaajaq. Cp. W avva, G aaviq *roof beam*.

avaataq *bladder float*. G avataq, P avataʀ; W avataʀvak, BM avataqpaq, with -vak, -vaq *large*.

apsuq *smoke*. N apsuχ, S apʃuq, apsuq, Y apʃuχ.

afciłŋaq *rat*. G aviŋŋaq *mole*, L aviŋaq *rat*, P avə-.

amik *door*, ammiit, ammiik. K amiik, N amix, Y amix, perhaps from dual of Y amiχ *skin*.

amiq *skin*, -t. N amiχ, KS WBMG amiq, Y amiχ, I amiq, P amiʀ.

amiʀlu *cloud*, -t, -k. K amiʀluq.

amaaʀï- *carry on one's back*, amaaʀaqa. S amaʀaʀ-, Y amaʀï-; WBMG I amaaʀ-; N amallaγiaχï-.

aa-mun *to that place*. K amai *yonder*, B amna *that one*.

amjak *clam, mussel, oyster*. B avjak (Rasmussen afjak), Y amjax, I avjak, P amjaγ.

amłiq *many*. (amł-, aml-). N amiłłaʀit, K amiłiq, Y amłiχ.

amŋaq *breast, udder*. K ammaʀ- (aamaʀ-) *take the breast*; cp. WBCG amaama *mama, mother's milk* (baby word), C amaamaγ- *take the breast*.

atïq *name*, atχit. N atïχ, K WBMG atïq, Y atïχ, I atəq, P atəʀ.

aata, atata, atataaŋ *daddy*, aataatit, aataatik; atak *father*. N atti *his father*, S atakka *his father*; B ataataq, G aataq *grandfather*; G ataataq *father*.

ataata *after a while*. K ataata.

attauciq *one*. N atauciχ, K atauciq, S ataasiq, WBMG atausiq, Y attauciχ, I atausiq, P atausiʀ.

ataakuaʀaq *evening*. (-uaʀaq, -uuʀaq). K ataaku.

atuq *sing*. NKS WBM YIP atuʀ-.

atuq *lend*. K WBG atuʀ- *use*, WB atuqti- *lend*.

anï- *go out*, annua. NS WBMG anï-, Y anï-, IP anə-.

anniu *snow* (on the ground). WBM aniu, NS YP anniu (S anji).

aniχtiʀuq *alive, breathing*. (an-, ann-; -tiχuq, -tiquq, -taʀuq). K G aniʀ-niq, W aniŋ-niq, BM aniq-niq; K aniχtifkaʀ- *breathe*; YIP aniʀ-

annau- *strike*, annauγaqa. N annau-, WBMG anau-, Y annau-, IP anau.

anaʀ- *excrement*, anaaqa *my excrement*. N anaχ, WBMG anaq, Y anaχ, I anaq, P anaʀ.

anuuqa *wind*. (aanuuqa). NK anuuqa (K anuqa), S anuqi, WBM anuʀa, InG anuʀi, YIP anuqa, -qi, ʀa, -ʀi. Cp. P aniʀ- *breathe*.

anŋaq *elder brother*, anŋaaŋ vocative, anŋaat, anŋaak. S anŋaʀ-, Y anŋaχ; W aniaqataa *his or her —*; G anï *woman's elder brother*; G anaqataa *his elder sibling*.

alliajuq *sad*. (alliaajuq). N allia- *mourning, lonely for*, alliajuγ- *lonely*, WB aliasuγ- *mourning, lonely for*, Y allia-juγ-, IP aliasuγ-.

alliuχtuq *ghost, spirit*, -t, -k. N alliuʀ- *haunt*, WB aliuʀ- *haunt*, G aliuʀtuʀ- *see a ghost*, P aliuʀ-.

aliŋ-taʀ- *cowardly*, aliŋtaχtuq. NK Y aliŋï- *afraid*; S aliγinaʀ- *terrifying*.

alappaa *it is cold*. N BM alappaa, B alapaaʀ- *cold (weather)*.

alŋaq *mark*. N alŋaʀ-, KS alŋaʀ- (alliŋaʀ-, K aliŋaq, S alliŋa-), WBMG aγlaγ-, Y alŋaʀ-, I aγla-, P aŋla- (?).

ałqaq *elder sister*, -t, ałqaak, ałqaaŋ vocative. N ałqaχ, K ałqaq (ałkaq), BG aliqaq, Y ałqaχ, I aləqaq, P ałəqaʀ.

ałχaʀuq *year*. K ałχakuq; N ałχaani, B alʀaani *a year or more ago*..

acipłuk *root*, acipłuut, acipłuuk. See aci-.

aci- *under*, atciani *under it*. (atciaani). NK aci, S asi-, Y aci; cp. WBMG atï-.

acak *maternal aunt*, atciit, atciik. W asa-, BCG atsaq, Y acax, I atsaq, P atsaγ.

acaq *fruit, berry*, -t, -k. NK acaq, W aziaq, BM asiat, Y asaχ, I asiaq, P asjaʀ.

acaχ-paq *apple*. (acax-). -paq *large*.

acłiq *saucer*, -t, -k.

akisŋaa *sneeze*. (aq-, ak-).

akkiimaŋaaxuq *win*. Perhaps cp. akiq *price*.

akkiłaq *stale*.

akiiγaʀï- *carry*, akiiγaʀaqa.

akiq *money*. W aγi-, NK BMG aki- *opposite side, price*, YIP aki-.

aakaq *mama*, aakkaaŋ vocative, aaka *mother*, -t, -k. (aaka, akka). Cp. NS aana *mother*, WBMG aanak *grandmother*.

aγaju-liχ-tä *priest*, -tit, -tik. (aʀ-). K aγajuliχtä; K aγajuliʀ- *hold divine services*; aγaju *mask festival, divine service*. -liʀ- *supply*, -tä agent.

akałʀia *wagon, train*, akałʀiakun *by train*. (akałʀiaakun). See akaγ-.

akaγ-, akaʀ- *roll*, akaχtuq. K akaγ- *roll*; S akaʀ- *capsize*, NS aqaʀ-, WB aqʀaʀ- *roll*, G aγʃaγ- *turn over*, P akjaγ-, akjaʀ-, aqjaʀ-.

akaaʀinkiγ- *round*, akaaʀinkixtuq. B akavaluqtuq (ax-). See akaγ-.

aγγuumaq *basket* -t, aγγuumaak. (aγγ-, aʀʀ-).

akχniaq *credit, borrow*. (akiq-, akiχ, aqχ-). See akiq.

aγja *star*. (aʀ-). K aγjaq (Hinz axiaq, Rasmussen aγiaq); B aγʀuk *two stars together*, I aγjuk.

axtuq *feel*. K axtuʀ- *touch*, M aktuʀ- *take hold*, Y axtuʀ-, I aktuʀ-, P aγtuʀ-; B aksiγ- *touch*; Ki aγʀaqtuʀ-, G aγʃaqtuʀ- *carry*, I aγjaqtuʀ-.

akŋiq *pain, hurt*, akŋiχtaa. NK akniq, WBMG anniʀ-, I anniʀ-, YP akniʀ-.

aŋï- *big*, aŋŋuq. NK BMG aŋï-, Y aŋï-, IP aŋə-.

aŋinquq *toe*.

aŋaajuqaq *parent, chief, boss*, -t, -k, aŋaajuqaaqa *my boss*. (-qaq, -ʀaq). K aŋaajuqaq (aŋaijuqaq), M aŋajuʀqaq *old man*; G aŋaju, WBM I aŋajuk *older sibling of the same sex*; W aŋajuklik, aŋajuγliq *oldest sibling*. Cp. aŋï- *big*.

aŋak *uncle* (translated *paternal uncle*, but this may be mistaken), aŋŋiit, aŋŋiik. N aŋi *his*—; In aŋak *parent's brother*, W aŋa, G aŋak *maternal uncle*, Y aŋax, I aŋax, P aŋaγ.

aŋu- *catch after chasing*, aŋŋuaqa; aŋunniaχtä *hunter*. N aŋu-, WBMG aŋu-, YIP aŋu-.

aŋŋuaʀ- *to paddle*. (aŋŋualʀa *he's paddling*). NK aŋŋuaʀ-, WBMG aŋuaʀ-, Y aŋŋuaʀ-, IP aŋuaʀ-.

aŋŋuaʀ-un *paddle*. NK aŋŋuaʀun, S aŋuaʀun, Y aŋŋuaʀun; WBM aŋuun, G aŋuut, I aŋuun.

aŋun *man*, aŋuutit, aŋuutik. NK WBM aŋun, G aŋut, YIP aŋun; WG also *father*, B also *husband*.

aŋuu-caluq *male animal*. K aŋuucaluq; N aŋucaχ, C aŋusalluq (-k) *bull caribou*, Y aŋu-saluχ, I aŋu-salluq, P aŋu-sallʊʀ. See aŋun.

aŋjaq *boat*, -t, -k; aŋjaχ-paq *ship*. N aŋjaχ (aŋizaq), KS aŋjaq, Y aŋjaχ; KS aŋjaχ-pak (Xwaŋkuta). -paq *large*.

aŋ-li- *grow*, aŋliuq. NK aŋli-, WBMG aγli-, I aγli, YP aŋli-. See aŋï.

aŋqaq *ball*, -t, -k. S aŋqaq (Xwaŋkuta), Y aŋqaχ; cp. G aʀʃaq.

aʀï- *ripe*, aʀʀut *they are ripe*.

aʀitfaq *mitten*, aʀitfiit, aʀitfiik. N aʀitfaχ; W iʀqan, BM atqan, G aaʀqat *mitten*; G aaq *sleeve*; G aʀvaq, W aqvaq *outer edge of hand*.

aqajγiŋnaaʀaq *chicken, turkey*. (aqazʀi-, aqazγi-, aqazki-).

aqavjik *salmonberry*, aqavjiit, aqavjiik. S WBML I aqpik *cloudberry*. S aqpik probably borrowed.

arraŋa- *proud*, arraŋauq. B. aruɣuaŋa-.

aru- *rot*, arruut *they rot*. See arï-.

aqquavaq *yesterday*. (akkuawaq). K aqquavaq (aqvavak).

aqumɣa- *sit*, aqumɣauq. (ak-, aq-). N aquumï-, K aqumɣa- (ak-), S aqumï-, Y aqumï-; W arumu-, BM aqumuɣ- *go backward;* W aruvitï- *squat*, B aquvitï- *sit*; W aru-, BMG aqu- *back end, rear*, I aqu-.

aqumɣa-utaq *chair*, -t, -k. K aqumłiq (ak-), S aqumittaq.

aruulair- *stop moving*, aruulaiχtuq. K aruulair-; BC I ariu- *stop doing*.

aruksaitï- *green*, aruksaitut *they are green*. See arï- *ripe*.

aquq *wood, stick*, aqquut, aqquuk. (aquk). S aquq, Y aquχ.

aqsaq *belly*. N aqsaχ, S aqsaq (Bogoraz), G aqajaq, Y aqʃaχ, I aqajaq, P aqajar; N aqsaχquχ, K aqsaquq, S aqʃaχquq (aqła-), W ariaruq, BM aqiaRuq, G aqajaruq *stomach, belly*, Y aqʃaχquχ, I aqajaruq, P aqajarqur.

arvi-nïlɣït *six*, arvinliɣni *for six (days)*. NS arvinilɣit (aχuviniliɣit), W aqviniliɣit, (aquvi-), G arvi-nïq; SG P arvir- *pass from one place to another* (numeral *six* expressed as passing from one hand to the second in counting fingers).

aqfaruq *run*. N aqfarur- (aqfaχur-), S aχpaatï-, WBM aqpaɣ-, G arpaɣ- *run, dance*, Y aqva-, I aqpaɣ-, P aqvaɣ-.

arnaq *woman*; arna-caaluq *female*; arna-raq *girl*, arnaraat, arnaraak. W aŋnaq, NKS BMG YIP arnaq; B arna-salluq; KS arna-raq. -caaluq (P saalluq), cp. aŋuucaluq *male animal*; -nraq *small*.

arnaqaan *cousin* (male or female, probably *parallel cousin on the mother's side*), -tit, -tik. C arnaqatï- *female companion, fellow husband* (relationship of two men who exchange wives), Y arnaqaatï-, IP arnaqaatə-. The suffix -qaatï- evidently means *related thru*, arnaqaan *related thru women*.

uutï- *burned, cooked*, uutuq. N utï-, K uutï-, WBM uutï- B uttir-; G uutïr-.

ujaaquq *neck*. N ujaχquχ, K ujaaquq, S ujaqquq; G ujaɣ-, ujakkar- *stretch neck*.

ujuuraq *younger brother*, -t, -k. N ujuraχ.

ujjuuq *say! here!*

ujvitu- *smart*, ujvituuq. K Y ujvitu- (-tuq); K uji *sense*; perhaps cp. B usiuma *I think so*, G usi *it's so* (Jenness 94).

upiniχqaq *spring of the year*. K upiniχqaq (upirnaχkaq), S upinraɣa, Y upinïrïqar-; W uvinraq, BM upinraq, G upirnaaq *summer*, I upinəraq; W uvinraqraq, B upinraqraq, M upinraq-jaq (M -ʃaq), I upinraqjaq.

ummia-lik *wealthy*. (ummee-, ummiaa-). WBM umia-lik *wealthy, possessing an oomiak*, Y ummialix; I umialik, P umialiɣ; WBMG umiaq, P umiar.

umïɣ- *close*, umɣan *when it closes*. S WBMG umiɣ- *blocked, barred* (S umixtuq *opens something*—probably misunderstood), Y umïɣ-, IP uməɣ-.

umjuar- *think*, umjuaχtiqi *you think*. K umjuar-; W izima, BMG I isuma- *mind, think*; P umijuar-, isuma-.

utïr- *return*, utχtua *I return*. N WBMG utïr-, Y utïr-, IP utər-; KG uti *the way back*.

utcuk *vulva*. N utcuk (ucuk), BMG utsuk (BM uttuk, but In utsuk). Cp ucuk *penis*.

utqiq *potatoes, sweet potatoes*.

una *this, that*, ukut. ukuk, NKS WBMG YIP una; N ta-ukut, WBM ukua (ukwa); N ta-ukuk, WBM ukuak.

unaaliq *Eskimo dialect of St. Michael's Island, Norton Sound*.

unnuaq *this morning*, unnuaqu *tomorrow*, unnuaquu-mi *in the morning*, unnuaquan *next day*. (unnuakuumi). K unuaq, unuaqu *tomorrow*, N unuaqqun *tomorrow*, WBM unuaq *last night*, Y unnuaχ, I unuaq, P unuar. See unuk.

unuk *night*, unnuuk, unnuuɣni *for two nights*. (unuk, unnuuk). N unux, KS WB unuk, Y unux, I unuk, P unuɣ.

ulï- *tide rising*, ulluq. W ulitï-; K uliq, L uli *high tide*; Y ulï-, IP ulə-.

ulik *blanket*, ulliit, ulliik. KG ulik, Y ulix, I ulik, P uliγ.

uuliγ- *tremble*, uulixtuq. (uuliχtuq). N uliγaʀ-, K WBMG uuliγ-.

ulu *tongue*. NS ulu *tongue*, WBMG ulu *blade, knife*, YIP ulu; K aluuŋun *tongue*. Also cp. P uɬuaʀ *cheek*, I uqaq *tongue*.

uci *freight, load*; uci-i-liʀ- *unload*, uciiliχtuq. N ucit, W uzi, G usi, Y uci, IP usi; B usiγ- *load up*.

ucuk *penis*. N ucux, K ucuk, W uzuk, BMG usuk, Y ucux, I usuk, P usuγ.

uksuq *winter*; uksuaq *autumn, last autumn*, uksauqu *next autumn*. NK uksu-, S uksu-, ukʃu- (Xwaŋkuta uxsu-, Jenness ukju-), W uγiuq, BMG ukiuq, Y ukʃuχ, I ukiuq, P ukəjuʀ.

uŋaalaq *south*. (uŋŋ-). N uŋaalaχ, K uŋaalaq *south wind, south*, WBM uŋalaq *southwest* or *west wind*, Y uŋalaχ, I uŋalaq, P uŋalaʀ.

uŋŋaaʀaq *moss*, -t, -k.

uŋuuva-n *heart*. NK uŋuuvan (K -γan), WBM uuman, G uumat, Y uŋuva-n, I uuma-n, P uŋuva-n, uuŋva-n; K uŋuuva-, W uuma- *live*; K uŋuuvalʀiit *creatures*.

uŋuuva-lʀia *animal*. (uŋŋuualʀia, uŋuwalʀa). See uŋuuvan.

uŋpik *snow owl*. (uŋpiq). N umpix, WBM ukpik, G uγpik, Y uŋpik, I ukpik, P uŋpiγ; S ukpik probably borrowed from W.

uqi- *fat, stout*, uqqiuq. See uquq.

uqiixitï- *light*, uqiixituq. N uqissitï-, K uqiiγitï-, Y uqiixʃitï-; W uʀiγ- (uwiγ-), BMG uqitï-; P uqiγ-. See uqqaamaitï-.

uqqaamaitï- *heavy*, uqqaamaituq. (ukk-). K uqamaitï-, BM uqumaitï-, See uqiixitï-.

uquq *blubber*. N uquχ, K uquq WB uqʀuq, G uʀʃuq, M uqjuq (uqʃuq), Y uquχ, I uqjuq, P uqjuʀ.

uquuʀ-un *grease*. See uquq.

uʀuʀnaq *mouse*. (uʀuʀ-, uγuγ-). Cp. L uqjunaq (ukjunak).

uqfiγaq *willow, bush*, -t, uqfiγaak. (-ʀaq). N uqfiχ, WBM uqpiq, G uʀpik *willow*, Y uqfiχ, I uqpiq, P uqvik; K uqfiγat *bushes*; S (Xwaŋkuta) uqfixɬak *forest*.

uqnaχï- *hot*, uqnaχuq. Cp. W uʀuʀ-, BMG I uquʀ- *warm* (clothing); N uqnaqɬiʀia *it is hot*, WBMG uunaʀ- *hot*.

uʀluʀaq *bow*. (oolaq). N uʀluʀaχ; cp. W uʀlaitï-, G uʀliʀ- *aim*.

jaasiik *box*, jaasiiγit, jaasiiγik. Russian jáʃçik.

javun *oar*, javuutit, javuutik. (jaa-, ja-). N. jaun. Cp. S ipun, W ivun, BM ipun, G iput *oar*, perhaps from P ijavun, ijvun; G ipuγ- *row*, W ivuγ-, N In ipuγ- *to lever*, YIP ipuγ. Perhaps also cp. jaqu *wing*.

jaa-ni *yonder*. NK Y jaani.

jaaksiγ- *far*, jaaksixtuq. K jaak-fak. Also cp. S javantuq *it is far away* (jeəvan-).

jaqu *wing*. N jaqu-, K jakuq, W izakuq, BCG isaʀuq; N jaʀ-, W izaγ-, BCG isaγ- *stretch wings*.

ju-inaq *twenty* (*complete person*, i.e. all digits counted). WBM I inuinnaq. See juk.

jualiʀjaq *crab*.

ju-pix-ta *Eskimo thing, Eskimo word* or *language*, jupixtat, jupixtaʀnik *from Eskimo*. K juppik *Eskimo*. -pik *genuine*. See juk.

ju-nʀaq *baby child*, junʀaat, junʀaak. -nʀaq *small*. See juk.

juk *person*, juut, juuk. N jux, KS juk, WBMG inuk, Y jux, I inuk, P inuγ.

juŋcaχ-tä *doctor* (*one who cures*), juŋcaχtit. K juŋcaʀistä; K juŋcaʀ- *restore to health*.

juʀ- *cure*, juχtaa. Perhaps cp. W iuʀ- *rub*, P ivuʀ-.

stuuluq *table*, -t, -k, -m. Russian stol.

vii *I*. N vvii-ŋa (kwiŋa); K vii-ŋa; cp. S WBMG uva-ŋa.

vii *husband*, viika *my husband*. K vi, G uvi, WM uvik; N K viiŋa (K wiŋa), B uiŋa *her husband*; YIP uvi, uniŋ.

viipi- not translated, viipiaqa.

piunaitï- *difficult*, piunaittuq.

pisa-nʀitï- *to mean no harm*, pisanʀituq, pisanʀitamkin *I mean you no harm*. -nʀit- *not*.

pi-juγ- *want*, pijuxtuq. K pijuγ-, W pizuγ-, BM pisuγ-, Y pijuγ-, IP pisuγ-. P pi- *thing*, -juγ- *want*.

pisuʀ- *hunt*, pisuχtuq; pisuχtä *hunter*. Cp S pilaγ- *hunt sea mammals*, WBCG pilaγ- *cut up carcass*.

piruufkaq, miruufkaq *rope*, -t, -k. Russian vjirjófka.

pitixcaq *shoot*. (pitiχ-). K pitiγaʀ-, W pitiksa-, BG pisiγ-, P pitiγ-; M pisiγ- from P pisiγ- or borrowed from another dialect which, like B and G, change t to s after i; K pitixcaun, G pisiγsi, BM pisiksi.

viita- *stay, reside*, viitauq, viitauŋa. K viita-.

pitaaqï- *catch* (fish, game), pitaaqaqa.

pi-li- *make*, pilliaqa. K piliakaa *makes it*. Cp. ca-li- *do*.

piilitcaq *pepper*. Russian pjérjic.

piliqpiliʀaaq *toad, frog*. (-ʀaq, -ʀaaq).

pilaa- *cut*, pilaaγaqa. S pilaγ- *hunt animals*, WBMG pilaγ- *cut up carcass*.

piluuγuʀ- *dress*, piluuγuχtuq. (-ʀuχtuq, -ʀaxtuq). N piluuγut *clothing*.

piciiχuq *do*. K picaγ-.

piciqnilï- *willing*, piciqnillua *I am willing*.

vik *grass*, viγit, viγik. S iviq, W iuik, BMG ivïk, Y vix, I əvik, P əviγ.

pikitï- *walk*, pikituq. NK pikïtï- (K piktuq), Ki pizuk, BMG pisuγ-, Y pikïtï-, I pisuγ-, P pi-.

piikinaq *hog*. Perhaps from English *pig*, with added native suffixes.

pikïq *to whip*; pikχtun *a whip*. W iviʀaq- *to whip*, G ipiʀaq *harpoon line*, C ipiʀ- *tied*, I ipiʀ- *tied*, ipiʀaq *line*, W iviita, B ipiuta, I ipiuta *thong*; W iviʀaʀ- *whip*, B ipiʀautaq *sled trace*, G ipiʀautaq *dog whip*, I ipiʀaq, ipiʀautaq; P əpi- *line*.

viixtauq *taste*. K viiγï- (viiγaa).

viixtuaʀ- *gamble*, viixtuaχtuq.

piŋaajut *three* (pl.), piŋaajuni *for three (days)*. K piŋaajun (piŋajun), NS piŋaajut, Y piŋaju-, IP piŋasu-.

piŋaaju-nïlγit *eight* (pl.), piŋaajunliγni *for eight (days)*. (-liʀni). K piŋaajunliγin (piŋajunliγin), In piŋasuniliγit. See piŋaajut.

pinʀaliq *rib*. (-ʀaliq, -ʀaaliq).

viʀ- *have a fit*, viχtut *they had a fit*.

piʀï- *bent*, piʀʀuq; piʀitï- *bend*, piʀitaqa. K piʀi- (piʀʀiuq), W piʀitï-, G piqitï-, B piʀitï- P piʀə-, piqə-.

piχpakkaa *love*.

piχtuqciiʀaq *otter*.

viʀŋa- *slanting, sober*, viʀŋauq. N viʀ- (uaχtuq), G uviʀ-, C uviŋa-, P uviʀ-, uviʀŋa-; B uvaʀ-, uvaŋa-, W uva-.

paiʀ- *lick*, paiχtuq. (paaiχtuq). G ippaʀ-, P əppaəʀ-.

paiχtï- *meet*, paiχtuq, paiχtaqa. N paiχtï-, WBG paaʀ-, Y paiʀ-, I paaʀ-, P paəʀ-

pau-nʀaq *blackberry*, -t, -k. N paunʀaq, G pauʀnaq; cp. WBMG pauq *soot*. -nʀaq *small*.

vaami *play*.

pamjuq *tail*. N pamjuχ (pammisuq), K pamjuq, WBMG pamiuq, Y pamjuχ, I pamiuq, P paməjuʀ. See also I papik *bird's tail*.

paatakkuq *honey, syrup*. K paatakuq.

pataγ-mik *early, fast (with haste)*. (pataʀ-). N pataγmix (N pataγumik), K pataγmik, W pataγ- *hasten*, YIP pataγ-.

vaataq *cotton*. Russian váta.

va-ni *here, there*, vaniixfa *here*. (waniixwa). N va, K vani, W uvva, uvani, BM uvva, G uva *here, this*; K vaniifa *here it is*; Y va, IP uvva.

panik *daughter*, panniit, panniik. N panix, K WBMG panik, Y panix, I panik, P paniγ.

pana *harpoon*, -t, k. S pana *spear*, WCG pana *large two-edged knife*, YIP pana.

vaɬɬu *then*. K vaɬu. See va-ni. -ɬɬu *or*.

paluu-nïq *skinny, lean*. K paluu- *starve*,. W paluŋu-, P paluu-.

paluqtaq *beaver*. K paluqtuq; perhaps cp. B paluktaq *red fox*.

paakiʀaa- *canned fish*, paakiʀaanik (*loaded*) *with canned fish*. Perhaps somehow derived from English *pack*.

vaŋkut *we* (pl.), vaŋkuk. S vaŋkun, (wankun), W uaγut, BMG uvaγut; W uaγuk.

paʀaaluaq *rice*. K paʀaaluʀuat *rice (like maggots)*. See paʀaaluq.

paʀaaluq *snake* (paaʀaaluq). See K paʀaalut *kind of white worms (maggots)*.

puaɬa *dance*. W pualla-, P puaɬla-.

pujuʀuaχaq *strawberry*, -t, -χaak. Perhaps cp. P pujuq *fog, smoke*.

pujuχ-łuq *dust*, -łuut, -łuuk. N pujuχ, K WBMG pujuq *smoke, fog*, Y pujuχ, I pujuq, P pujuʀ.

pupiiʀuaq *tree fungus*, -t, -k. K pupi, W puvik, G pupik *eruption*, YIP pupi-.

putu- *perforate*, puttuaqa; puttuuʀï-*punch many holes in*, puttuuʀaqa. W putu-, YIP putu-; C putuγ-*pierced*; N puutu, WBG putu *hole*.

pupsu- *pinch*, pupsuaqa. N pupsu-γï-; W pusuk, G putsuk *thumb and forefinger together*, I putsuk.

pulaafkaq *safety pin*, -t, -k. Russian buláfka.

puxta- *float*, puxtauq; puxta-un *float, lungs* (recorded only with meaning of *lungs*). K puxta-, G puγta-, WBC pukta, Y puxta-, I pukta-, P puγta-; K puxtaun, WBC puktaun *float*; cp. N puvaq, B puvak, G puak *lung*; K puxtautit *lungs*.

puqła-ciiʀaa *heat*. NK puqła *heat*.

pχitï- *clean*, pχituq. (pχχituq). W ipqit-, Y pχitï-, I əpqitə-, P əpəʀitə-; BG ipiq *dirt*, I əpəq, P əpəʀ.

mijliŋuq *bug*. See also milliŋuq.

miisiuk *sack*, miisiuγit, miisiuγik. Russian mjiʃók.

miruufkaq, piruufkaq *rope*. Russian vjirjófka.

mi-nʀitï- *sober*, minʀituq. -nʀitï- not, miʀ-*drink*.

milliŋuq *bug*. K miliŋut *bees*, N milliŋuχ *carabid beetle* (miłł-), WBMG miŋŋuq *beetle*, P milliŋuq, milŋuq. See also mijliŋuq.

miluk *suck, smoke*. K WBMG miluγ- *suck*, YIP miluγ-.

miluγjaq *wasp*. In milluγ- *sting*.

miłqaʀï- *hit with missile*, miłqaʀaqa. Cp. WBMG miluʀ- *throw a stone*.

miłquq *feather*. N miłquχ, K miłquq, G miʀquq, WBM mitquq *hair, fur, feathers*, Y miłquχ, I mitquq, P miłquʀ.

miciγ- *jump*, micixtuq. W miziγ-, L misiγ-*hop, jump*, Y micïγ-, IP məsəγ-; G miŋiʀ-*leap*; BC mitiγ- *leap*, I mətiγ-.

micuxpaq *wet*. (micax-). K micuŋï- *wet*, K micuq *sap*, G misuγ- *dip*, W mizu *juice*, Y micu-, IP misu-. Perhaps cp. miq *water*.

mikï- *little*, mikkuq. NK WBMG mikï-, Y mikï- IP mikə-.

miŋuk *rub*. K miŋuk- *anoint, paint*; G miŋuk *dirt*; W miŋu-li-, B miŋu-liʀ- *paint*.

miŋqun *needle*, miŋqutit. (miŋquttit). K miŋqun (miŋkun) S miinqun, W miʀqun, BM mitqun, G miʀqut, Y miinqun, I mitqun, P miinqun.

miq *water, drink*, miʀit, miʀik, miχtuq. N miχ (maχ), KS miq (S Jenness-Rasmussen imiq, Bogoraz miq), Y miχ, I imiq, P əmiʀ.

miq-suk *thirsty*. K miq-suγ-

miʀmi translated *ice*, perhaps incorrect for miʀ-mi *in water*.

massiutnaq *wild parsnip*, -t, -k.

masi- *mash*, massiuq.

massuutnaq personal name (James Andrews). Perhaps cp. massiutnaq.

majuʀ- *climb*, majuχtuq. K WBMG majuʀ-, YIP majuʀ-.

maatmun *this way*. N maani *in this way*; S maatin *today*, WBMG manna *this*, YIP ma-.

manniatï- *rough*, manniatuq. K maniatï- *uneven*. See manixpaq.

manik *egg*, manix-paq *large egg*. K manik, S manŋik. WBMG mannik, Y manix, I mannik, P manniγ.

manix-paq *smooth, flat*. K BCG maniγ-, YIP maniγ-. -paq *large, very*.

maniγnaq *halibut*. (maniʀ-, maniγ-).

malakuq *milk*. Russian malakó (in standard orthography molokó).

malʀu-nïlγit *seven* (pl.). K malʀu-nliγin, In malʀuniliγit.

malʀuk *two* (du.), malʀuγni *for two* (*days*), malʀuk ippiaq *forty*, malʀuk ippiaq qulnik *fifty*. N malʀux, KS WBM malʀuk, G maʀluk, Y malʀux, I malʀuk, P malʀuγ.

macaq *sun*. S maasaq, W mazaq (mazzaq), Y macaχ, I masaq, P masaʀ.

maŋaaγï- *squeeze*, maŋaaγaqa.

maqi *bath*. KB maki- *take a sweat bath, perspire*.

maqii-nïq *Saturday, week*, maqiiniʀmi *for a week*, maqiiniχłua *another week*. K makiiniq *bath, Saturday, week*.

maʀaq *flat*. K maʀaq *level ground*, WBMG maʀʀaq *mud*, Y maʀaχ, I maʀʀaq, P maʀʀaʀ.

maqaaʀuaq *rabbit*. K maqaaʀuaq (-γuaq).

mumix-ci- *translate*, mumixciukuk *we two translate*. K mumiγ- *invert, translate*, WBMG mumiγ- *invert*, YIP mumiγ-.

munaaqï- *watch, tend*, munaaquq. (mun-, munn-). W munaʀi-, B munaʀinni- *tend a sick person*, P muna-.

mulutuuk *hammer*, mulutuuγit, mulutuuγik. Russian malatók, orthographic and dialectical molotók.

tiisitcaaq *thousand*. Russian tísjiça.

tipittikuuvik *onion*. W tivi, KG tipi *taste, odor*, YIP tipi; W tivitu- *having a strong taste or odor*.

timä *body*. (timm-). K timä, N timï-, BG timï, Y timä, IP timə.

tikiitï- *arrive*, tikiicamta *when we arrive*, tikiipailimta *before we arrive*. NK tikiitï-, WBMG tikitï- Y tikitï-, IP tikitə-.

tiγu- *take*, tiγγuuq; tiγu-miaqï- *hold, carry in hand*, tiγumiaqaa. (tiʀimiaqaa, tiγum-). N tiγï-, K tiγuu-, W tiu-, BCG tiγu-, Y tiγï-, tiγu-, I tiγu-, P tiγə-, tiγu-; K tiγuumiakaa *has it in his arms*.

tiγuutaaq *slave*. See tiγu-; WB tiγuaʀ- *adopt*.

tiŋï- *fly*, tiŋŋuq. (tiŋuq). KS BMG tiŋï-, Y tiŋï-, IP tiŋə-.

tiŋuk *liver*. K tiŋu, N WBG tiŋuq, G tiŋuk, YIP tiŋu-.

tiŋmiacuŋaq *bird*. (-maa-, -miaa-). See tiŋmiaq.

tiŋ-miaq *duck*. K BMC tiŋmiaq *bird*, Y tiŋmiaχ, I tiŋmiaq, P tiŋmiaʀ.

tiŋluʀï- *punch*, tiŋluʀaqa. WBMG tiγluγ-.

tiq *buttocks*. N tiχ, S tiq (Rasmussen itiq), Y tiχ, I ətiq, P ətiʀ.

tiχtiq *humpback salmon*.

tai- *come*, tai imperative, taiγukut *ve come*; taijï- *bring*, taijγu *bring it*. K tai-.

taituk *fog*. Cp. taamjik.

ta-una *he, she, it*, ta-ukut *they* (pl.), taukuk. (taau-). NKS WBMG YIP ta-. See una.

tauxkin *then, after that*. See tauna.

tajaʀ-nailitaq *bracelet*, -t, -k. W tajaŋniq, S BM tajaʀniq, G tajak, tajaʀnaq, P tajaʀ *wrist, forearm*.

tava *that's all*. See tauna.

tavaa-ni *there*. See tava, tauna.

taavaaqiq *tobacco*. Russian tabák.

tafcik *belt*, tafciit, tafciik. N tafsi, W tapsiq (tapziq), BM tapsi, G tavsi, Y tafci, I tapsi, P tavsi.

tammaat, tammaan *all, all of it*. W tamat *all kinds of things*; K tamaq *all*, I tama-v- *both, all*.

tamaq *lose*. NK tamaʀ-, WBMG tammaʀ- *get lost*, Y tamaʀ-, IP tammaʀ-.

tammua *chew*. KW tamua-, BCG tamuʀ-, YIP tamua-, tamuʀ-.

taamjik *dark*; tammlik *dark*. N taaχ, WBG taaq *darkness*, Y taaχ, I taaq, P taaʀ; K tanγaq *darknesss* S taŋγuʀ- *black* G taʀʀaq *shadow*; K taamlik *place where the spirits of certain dead are*. See also taituk *fog*.

tamlu *chin*. N tamlu, K tamluq (tamuluq), WBM tavlu, G tavluq, Y tamlu(χ), I tavlu(q), P tamlu(ʀ).

tatłxaq *crane*. (tatsłxaq). C tatilγaq, W tatiʀγaq, P tatəłγaʀ.

tanqiγi- *shine*, tanqiγiuq. (-ʀiuq). K tanqiγi- (-kiγi-) *light*, N tanqi *daylight*; N tanqiχ, S tanqiq (Xwaŋkuta), W taʀqiq, BM tatqiq *moon, month*, Y tanqiχ, I tatqiq, P tanqiʀ.

tanγu-ʀaq *boy*, tanγuʀaat, tanγuʀaak. (tanʀuχaq, tanγuʀaq). K tanγaʀuluq; K taʀu *man*; C tau person; P ta-. -nʀaq *small*.

taɬii-mat *five* (pl.), from *complete hand or arm*. NK taɬiimat, S taɬimat, WBM tallimat, G tatlimat, Y taɬimat, I tatlimat. See taɬiq.

taɬiq *arm*. (taɬaq). N taɬiχ, KS taɬiq, WBMG taliq, Y taɬiχ, I taliq, P taɬiʀ.

taɬiiqu- *Aleutian archipelago*, taɬiiqumun *to Aleutians*, taɬiiqumik *from Aleutians*. See taɬiq.

takï- *long*, takkuq. W takʀu-, NK BMG takï-, Y takï-, IP takə-.

taakiraʀ- *doctor*, taaktiraχlu *along with the doctor*. From English.

taŋiłłi- *town*, taŋiłłimnik *from my town* (translation not certain).

taaŋiʀuq *drunk*.

taŋlu *snowshoe*, -t, -k; taŋluʀ- *put on snowshoes*, taŋluχtuq. NKS taŋlu, WB taγlu, Y taŋlu, I taγlu, P taŋlu.

taŋχtï-, taŋχï- *see*, taŋχtua, taŋχaa; taŋχctaaq *show*; taŋχctaaʀuʀ- *take part in show*, taŋχctaaʀullua *that I take part in show*; taŋχctaaviaχtuʀ- *to be in show*, taŋctaaviaχtuʀlua *in order that I be in show*. N tankï-, K taŋχï-; BMG I tautuγ-.

taquukaq *bear*. CP Point Hope takkuaq *polar bear*.

taʀjaxfaq *king salmon*. K taʀjaqfak.

taʀjuq *salt*, *ocean*, taʀjuuk. N taʀjuχ (taʀʀiuχ), KS taʀjuq, WBM taʀiuq, G taʀajuq, Y taʀjuχ, I taʀajuq, P taʀajuʀ.

taχtu *kidneys*. N taχtu, G taʀtu, WBM taqtu, Y taχtu, I taqtu, P taʀtu.

taaʀnaq *liquor*. See taaŋiʀuq.

tuik *shoulder* (du.). (tuiik). N tui, W tuik, BM tui, G tuvi, Y tui, IP tuvi.

tujuq *send*. NKS WBG tujuʀ- *send a message*, *invite a guest*, YIP tujuʀ-.

tuftï- *choke*, tuftuq. WG tupitï-, Y tuftï-, I tuppətə-, P tuvpətə-.

tupaγ- *awake* tupaxtuq. (-paχtuq). W tuvaγ-, BMG, tupaγ-, YIP tupaγ-.

tumä *road*, tumit, tumik. N tumä, K tumä (tummä), S tumä, WBG tumï, Y tumä, IP tumə.

tutxaq *grandchild*, tutxat, tutxaak. (tutxaq, tuutaq). W tutïk, Y tutxaχ, I tutək, P tutəγ, tutəγaʀ..

tunï- *sell*, tunnuq. CG tuni- *make a present*, Y tunï-, IP tunə.

tunu- *behind*, tunnuani *behind it*. NK WBMG tunu-, YIP tunu-.

tunuq *tallow*. N tunuχ, K tunuq (tunnuq), WBCG tunnuq, Y tunuχ, I tunnuq, P tunnuʀ.

tuntu *caribou*. NKS tuntu (S Bogoraz), G tuγtu, M tuktu, Y tuntu, I tuktu, P tuŋtu.

tuntu-nʀaq *cow*. -nʀaq *small*.

tuntu-χpaq *horse*. (-xpaq). -χ-paq *large*.

tunʀaq *devil*. N tunʀaχ, BMG tuuʀnaq (BM tuʀnʀaq), W tunʀaq, Y tunʀaχ, I tuuʀnaq, P tuunʀaʀ.

tulukaaʀuq *crow*. Cp. K tuluukaʀuq, tuluukaq, N tulukkaq, BMG I tuluγaq, G tuluvaq alternate form.

tuŋuuli *black*. K tuŋuq, N tuŋuliʀia *black*, *dark*; G tuŋujuʀ- *blue*.

tuqï- *die*, tuqquq; tuqu- *dead*, tuqquuq; tuquutï- *kill*, tuquutaa. NK tuqï-; BMG tuqu- YIP tuqu-; KS tuquutï-, W tuʀutï-, BM tuqutï-, Y tuqutï-, IP tuqutə-.

txï- *hard*, txxuq. (tixxuq). N txï- (tχuχ); perhaps cp. N tixsax *red spruce*, WM itkiq, BG ikkiq *hard wood*, esp. *red spruce*; also cp. WM siti, B sisi-, G sisak *hard*.

niitï- *hear*, niituq. NK niitï- (K nituq).

nivviaχcaq *lady*, nivviaχcamik. K nivviaχcaq (niviaχcaq), BM niviaqsiaq, G niviaq, Y nivviaχsaχ, I niviaq, niviaqsiaq, P niviaʀ, niviaʀsiaʀ.

nimiʀjaq *eel*. C mimiʀiaq *worm found in pods*, P nimiʀïjaq; N nimiχ, K InG nimiq *bandage*, Y nimiχ, I nimiq, P nimiʀ.

niliq *flatus*. BG niliq, Y niliχ, I niliq, P niliʀ.

niliʀ-nat *beans* (pl.), niliʀnaq.

nillaq *laugh*. N nillaʀ- (niłł-).

nikitï- *to iron*, nikitaqa.

niγiq *north*. (niʀaq). N niγiqfaχ *north wind*, W niuiq *northeast wind* (nüaq), In niγiq *northeast wind*, BM niγiq *east wind*, G niγiq *southeast wind*, Y niγiχ, I niγiq, P niγiʀ.

niŋjuq *grandmother*, niŋjut, niŋjuuk. WG niŋiuq, Y niŋjuχ, I niŋiuq, P niŋəjuʀ.

niʀï- *eat*, niʀʀuq. NKS WBMG niʀï- (N niʀuq, KS niʀuq), Y niʀï-, IP niʀə-.

niʀï-stä *louse*, *grasshopper*, *cricket*, from *eater*. NK Y niʀistä.

niʀï-ctaaq *poison*, niʀictaaʀit, niʀictaaχtuq. (niʀ-, naʀ-). K niχcitaaq, Y niʀïcïtaaχ.

niqä *fish*, niqnik *with fish*. (niqa, niqqa). NK niqä (N niqi, niqat) food, fish, W niʀï, BMG niqï *food, meat*, Y niqä, IP niqə. See niʀï-.

niqalli-viγ- *cannery*, niqallivigmun *to a cannery*. (naq-). -vik *place*.

niʀaacuŋaq *cloth*, -t, niʀaacuŋaak. Perhaps cp. BC niʀumiγ- *soft and warm (clothing)*.

niqqaʀ- *remember*, niqqaχtuq-; niqqaʀï- *remember it*, niqqaʀʀaa. N niqaʀï- (niqaχχa), K niqakaa.

nnä *house*, nit, nik. NKS nna (K na, inna, S ina, inna) *house*, S *inside of house*, G inï, WBM innï *room, settlement, lodging*, Y nnä, IP ənnə.

nau *where*; nani *where*; natmun *where to*. (naau). K nauγa, G nauk, BM nau, P nauk, nau; NK W P nani.

nau- *grow*, nauγuq; nauciq *rhubarb*; nauciʀaq *plant, flower*, -t, -k; nauciʀaχkaq *seed*, -t, -k. (nauʀuq). K nau-, WB nau-, YIP nau-; N nauvicit *plant*; W naumaʀuq *leaf*; K naunniʀaq *plant, flower*; naucitaq *vegetable*; K naucitaχkat *seeds*.

najiq *hairseal*, najjiit. N najiχ, KS najiq, Upper Kazan najiq (naʃiq), Y najiχ, I najiq, P najiʀ. Also cp. S nixsaq, G natsiq.

najaaʀaq *younger sister*, -t, najaaʀaak. K najaγii *his or her younger sister*; G najak, WBM najaq.

nasquq *head*. K nasquq, S naʃquq, WBMG niaquq, Y naʃquχ, I niaquq, P najaquʀ; cp. N nanquχ, BM natquq *arrowhead*, Y nanquχ, I natquq, P nanquʀ.

napa *tree, spruce*, -t, -k. K napa, N napalʀia (napalliʀia), S napaaχtuq *tree*, W navaaqtuq, B napaaqtuq, G napaaʀtuq; BG napa *upright*; YIP napa.

navʀiitï- *borrow*, navʀiituq. (navʀituq). K navʀiitï- *lend*.

naataq *hoot owl*.

natciaχsaq *seal pup*. M natsiaq, Y naciaχsaq, I natsiaq, P natsiaʀ; S W naqsaq; BMG I natsiq *seal*. See also najiq.

naniitï- *short*, naniituq. K naniitï-, WBMG naitï-, P nanitə-.

naniq *light*. S WB naniq *lamp* (S Xwaŋkuta), Y naniχ, I naniq, P naniʀ; BG naniʀuaq *lantern*.

naniq *bone*. (nanaq). N naniχ.

naniχ-paq *spear*. (-xpaq). -χ-paq *large*.

nanvaq *lake, pond*, -t, -k. N nanvaχ (nannuvaq), WB naʀvaq, M najvaq, Y nanvaχ, I najvaq, P nanvaʀ.

naɬɬikï- *hit with missile*, naɬɬikaqa.

nalaaqï- *find*, nalaaquq. K nalaqï- (nalakaa); NK nataqï- (N nataqqa, K natakaa); G nani-; WB navʀaʀ-, G navʃaaʀ-, I navjaaʀ-.

naɬu- *not knowing*, naɬɬuaqa *I don't know him*, naɬɬuan *you don't know him*; naɬunʀitï- *know*, naɬunʀituq. N naɬu-, WBMG nalu-, I nalu-, YP naɬu-.

nacaq *hood, hat*, -t, -k. N nacaχ, S nasapiʀaq, W nazaq, BCG nasaq, Y nacaχ, I nasaq, P nasaʀ.

nakaacuk *bladder*, nakaacuka *my bladder*. K nakaacuk, W naγasuk, BG nakasuk, Y nakacux, I nakasuk, P nakasuγ.

nakɬiʀnaq *poor, pitiful*. K nakɬiγnaχkuq *pitiable*; WB naγli- *pity*.

nakkuu *sweet*. S naγuu- (perhaps borrowed from W), W naγuu-, BM nakuu- *good*, Y nakkuu, IP nakuu-; cp. G nakkuʀ- *like*.

naŋtï- *sick*, naŋtuq; naŋtinʀiitï- *well*, naŋtinʀiituq. K naŋtï-, W naŋitï, Y naŋtï-, IP naŋətə-; G naŋiγ- *suffer a relapse*.

naŋiʀŋa- *stand*, naŋiʀŋauq. (naŋaʀ-, naŋiʀ-), K WC naŋiʀ-, YIP naŋiʀ-; N naŋi-un *thumb*. Also see napa.

naʀï- *smell*, naʀʀuq. K naʀï-, WBMG nai-.

naʀuɬkaq *spear*, -t, -k; naʀuɬkaqaataʀ- *poise a spear*, naʀuɬkaqaataχtuq. N naγuɬliγaχ *harpoon head and blade*; W naulliγa-un *harpoon*, B naulliγaq *harpoon*, G nauliγaq *harpoon head and blade*, P naγuɬliγaq; W naulliγa-un *harpoon*; C naulaq.

naaʀuq *blossom, bloom*. See nau-.

nujaq *hair*. N nujaχ, KS WBMG nujaq, Y nujaχ, I nujaq, P nujaʀ.

nujuχtaʀ- *wild*, nujuχtaχtuq; nujunʀitï- *tame*, nujunʀituq. (nujuuχituq). L nujuaʀ- *wild*, L nujuitï- *tame*.

nutaaʀaq *fresh, new*. N nutaaʀaχ, K nutaaʀaq, WBM nutaʀaq, Y nutaʀaχ, I

nutaʀaq, P nutaʀaʀ; WBMG I nutaaq *new*.

nuna *land*, -t, -k; nunat *town*, -t, -k; nunaataq *from the land*, perhaps *native thing*. NKS WBMG YIP nuna.

nulliaq *wife*, -t, -k. N nuliaʀ-, K nuliaq, WB nuliaq, BM nulliaq, Y nulliaχ, I nulliaq, P nulliaʀ.

nukałpiaq *young man*. K nukałpiaq, S (Rasmussen) nukałpiaʀaq, W nuγkatpiaq, BM nukatpiaq, Y nukałpiaχ, I nukatpiaq, P nukałpiaʀ; perhaps cp. I nukaq *younger brother*.

nuqitï- *pull*, nuqitaqa.

naʀaχcuʀuik *summer*, from *fawning season*. (nuʀax-). N nuʀaχ, WBMG nuʀʀaq *fawn*, Y nuʀaχ, I nuʀʀaq, P nuʀʀaʀ.

liitï- *learn*, liituq. NK litï- (N llituq, K litaa), WBMG ilitï-, Y litï-, IP əlitə-.

liγ- *char*, lixtaa. NK liγ- (łlixtuχ), WBG iliγ-, Y liγ-, IP əliγ-.

łliiʀï- *bet*, łliiʀuq. N łlia *lays it down*, WBMG I ili- *lay down*, P əłlii-.

liqłiq *goose*. (liqłaq). W liʀliq, BG niʀliq, P liʀłiʀ.

lauciq *halter*.

laatuχaq *porch*, *shed*. K laufkaq *house*. Russian láfka *store*.

luusitaq *horse*. Russian lóʃadj.

lumaaxaq *shirt*, -t, -k. Russian rubáxa.

luumaq *crowbar*. Russian lom.

luuciŋaa *he thought of it*. Perhaps cp. liitï- *learn*.

łpit *thou*, łpici, łpitik. (ił-). NKS łpi- (K iłpi-), WBM ilvi-, G ivli-, Y łpi-, I əlvi-, P əłvi-.

łquaʀ-nïq *smelt*.

cii *freshwater whitefish*, called *chee-fish*. Cp. W siγlitaq *whitefish*.

ciu- *bow*; ciumi *ahead*. N ciu-, K ciu, W siu, G suju, BM sivu, YIP sivu; S sivuliq *first*.

ciun *ear*. NK ciun, BM siun, G siut, Y ciun, IP siun.

ciisquq *knee*. N cisquχ, K ciisquq (-kuq), S siiχquq, G siiʀquq, WBM siitquq, Y ciiʃquχ, I siitquq, P siitquʀ.

ciivak *bee*. K ciivak *blowfly*.

cipsaq *hip*. N cipsaχ, W sipjaq (W sipsaq, Ki sipiaq), B sivjaq, G sivviaq, Y cipʃaχ, I sivvəjaq, P sivvəjaʀ.

cimiq *swap*. K cimiʀ- *change*, W simiʀ-a *its equivalent*, P simiʀ; B similjiʀ- *change*; W sipiʀ *give extra*; W sipniq, G sivniq *surplus*.

ciimaq *stone*, ciimat, ciimaak. N cimmaχ.

ciin *why*. K ciin; N cauna, S saava *what*, Y cauna; WBMG I suna.

cikik *squirrel*. S sikik, WB sikʀik (siksγik), M siksik, Y cikix, I sikjik, P sikjiγ.

cikiq *give*. NK cikiʀ- (N cikixtuχ).

cikkavviaq *hawk*. (cikkavjaq).

ciku *ice*, -t, -k. NK ciku, S siku, W siγu, BMG siku, Y ciku, IP siku.

ciγuuniq *antler*, *horn*. N ciγuuniχ ciγuuniq (ciʀ-); perhaps cp. W siγjuk, BG siγγuk *beak*.

ciŋaʀ- *kiss*, ciŋaχtuq. K ciŋaʀ- *embrace*, *kiss*. Perhaps cp. qiŋaq *nose*.

ciʀï- *cover*, ciʀʀuq. Perhaps cp. W siʀinʀaituq, siʀinʀataqtuq *blinks*.

ciquumï- *break*, ciquumuq. K ciqumtï-, W siʀimitï-, BM siqumitï-, P siqumïtï-; G siquγ-.

ca- *something*, *what*. See cama, ca-nʀitï-, ca-li, calliaq.

caujaq *drum*, -t, -k. N caujaχ, K caujaq, S saajaq, WB saujaq, Y caujaχ, I saujaq, P saujaʀ.

caujaʀuaq *winter month*, *time of the bladder dance*. See caujaq.

caajuviaq *silver salmon*.

cajjaitï- *weak*, cajjaituq. K casciiγatï- *unable to do*, WB sajiʀ- *weak*, G saja- *without strength*; cp. B saŋi-, G saŋŋi- *strong*, K caγniq *effective*.

caaskaq *cup*, -t, -k Russian çáʃka. Cp. S całqaq, In sastak.

cavik *knife*, cavviit, cavviik; caviiʀï- *cut with knife*, caviiʀaqa. N cavix, K cavik, S WBMG savik, Y cavix, I savik, P saviγ; WBM saluγ- *scrape skin*; N casqu, B satqu *weapon*, C satqun *large two-edged*

knife, satquq *bow*, G sakku *weapon*, P satqu.

capakiq *shoe*, -t, capakiik. Russian sapagí.

capχitï- *brave*, capχituq. K capχitï- *almighty*, WBMG sapiʀnaʀ- *invincible*, perhaps sapi- *hinder* plus negative suffix; N capi-, W savi-, BCG sapi- *block*.

ca-ma *some*. N cauna, K ca, WBMG su-na *something, what*, Y cau-, I su-, P sau-, su-.

cani- *near*, canniani *near it*. K cani-, G sanni *space nearby*, Y cani, IP sanni.

ca-nʀitï- *nothing wrong*, canʀituq; canʀit-ni- *agree* (*say there is nothing wrong*), canʀitnia. K canʀitï-. -nʀitï- *not*, -ni- *to say*.

ca-li *more, furthermore, also again*. N cali, WBMG suli, P sali, suli; cp. cama.

calliaq *job, work*; ca-li- *to work*, calliuq. K caliaq; NK cali-; WBM savaγ-; G sana-; B sanaluʀun *tool*. -li- *do, make*.

caluq *fight*, caluχtuq. (caluq, caluk). K calulʀiit *those who beat one another*.

caqiliŋataq *butterfly, hop leaves*. (cak-, caq-). K cakiliŋatat *kind of butterflies*, M saqalikisaq, C saqalikitaq, G saʀiniʀitaq, L saʀalikitaq.

cakkaiq *chest*. S saγiq *breast*, W saγiaγit, B sakiaγit, C sakijit, G sakiak, Y cakiax, I sakiak, P sakiaγ; B sakʀaq *crosspiece on frame of drum*.

caaxalaq *sugar*. Russian sáxar.

cupu-n *gun*, cupuutit, cupuutik. N cupun *breath*, WBM suppuun *gun*; NK cupï- *blow*, Ki supï- *fire a gun* (supʀuq), G supï- *blow*; Y cupï-, IP supə-, suppə-.

cukkaitï- *slow*, cukkaituq. (cukkaito). N cukkaitï-, BC sukaitï-; NK cuka-, W suγa-, B suka- *fast*, Y cuka-, IP suka-.

cuxxaq *beak*. N cuxix, W siγuk, BG siγγuk.

cuŋaq *gall*. K cuŋa, G suŋaq, Y cuŋa, IP suŋa.

cuŋaʀ-li *green, blue*. K cuŋaʀ-, WB suŋaʀ-.

cuʀa *blueberries*, -t, -k.

cuʀaaŋali *gray*. Perhaps cp. G suŋaaʀ- *golden*.

ctaamat *four* (pl.), ctaamanik *and four*. NK staamat (N stamat, K stauman), S stamat, BG sisamat, WM sitamat, Y ctamat, IP sitamat.

ctuk *claw*. N ctu (ltu), S stuk (Jenness situk, Bogoraz əstuk), Y ctu.

cli- *grind*, cliuq; cli-n *file*. WG sili- *sharpen*, Y cli-, I sili-, P sili-; WB silin, *whetstone*, Y clin, I silin, P silin.

cla *sky, weather*. K la, N sla, S siła, WBMG sila, Y cla, I sila, P siła.

claiq *insane*, claiχtuq. K łaitï- *lack sense*; K łaŋïtï- *have sense*; K łaŋu- *get understanding*; NKS Y cla- *sense*.

kiak *summer*. (kiiak). N kiax, K kiak, S kiaγa, BG kiak, Y kiax, I kiak, P kiaγ; also cp. M kijaʀ- *warm*, In kijjak *heat*.

kiu- *answer*, kiuγaqa. K kiu-, WBL kiu-, YIP kiu-.

kipï- *cut, chop, sever*, kippuq. W kiui- (kuuvi-), K BMG kipï-, Y kipï-, IP kipə-.

kipuutï- *buy*, kipuutuq. K kipuutï-. Perhaps cp. Russian kupjítj.

kivγaluk *muskrat*. (kivʀ-, kivγ-). WBM kivγaluk.

kitŋik *heel, cranberry*, kitŋiit, kitŋiik. N kitnix, S kitnik, K kitŋik, WB kimmik, CG kiŋmik, Y kitŋix, I kiŋmik, P kipŋiγ (?).

kiniʀ- *dry*, kiniχtuq. K Ki YIP kiniʀ-.

ki-nïq *match*, probably also *fire*, kinʀit, kinʀik. N kiniχ, K kinïq, S iknïq, G iŋnïq, WBM iγnïq, Y kinïχ, iknïχ, I əγnəq, P əγənəʀ; W iγitï-, BMG ikitï- *afire*, I əkitə-; N kumaʀ-, S ikumaʀ-, G ikuma- *afire*, IP əkuma-.

kiniχ-piłaq *lightning, to lighten*, kiniχpiłaχtuq. K kiniχpałaq.

kiniχ-cun *firedrill*, kiniχcuutit, kiniχcuutik. (kinix-, kiniχ-, -cun, -cuun).

ki-na *who*. NKS WBMG YIP kina.

kilik *scrape*; killii- *scratch*, killiiγaa. WBG YIP kiliγ-.

kiluuvaq *west*. B kiluvaʀ- *move back*, Y kiluvaχ, I kiluvaq, P kiluvaʀ; N kilu-, WBMG kilu *back edge*, YIP kilu-; also see kiŋuu-.

kici- *count*, kicłuki *that one count them*. K kici-, W kizitï-, G kisitï-, Y kicï-, IP kisə-.

kiγmaʀ- *bite several times*, kiγmaʀaaput *we bite them repeatedly*; kiγmautī- *bite each other*, kiγmautut *they bite each other*. See kxï-.

kixtï- *bite*, kixtuq. See kxï-.

kiŋu- *rear, stern*, kiŋuumi *behind*; kiŋuu-nïʀ- *back home* (?), kiŋuunimni *in my home* (?). NK BMG YIP kiŋu-; N kiŋuγlia *last* (kiŋuʀlia), S WBM kiŋulliq, G kiŋuγliq *hindmost part*; K kiŋuu-nïq *result, consequence*.

kiŋuqfani *late*. See kiŋu-; cp. K kiŋuʀauʀ-, L kiŋuʀai- *come late*.

γa- *to cook*, γγaaqa. N γa-, WBMG iγa-, P əγa-. See γasta, γan.

kaiγ- *hungry*, kaixtuq. WBMG kaaγ-, KS kaiγ- (S kiaxtuq), Y kaiγ-, I kaaγ-, P kaəγ-; M kajiγaq *hunger*.

kaji- *strong*, kajjiuq. W kajumiγ-; W kajua *biceps*; K kajaγa- *call loudly*; kastu- *loud*.

kajŋuujuk *bashful, ashamed*. S kaiŋujuγ- (kaii-), W kaŋuijuγ-, BM kaŋusuγ-, G kaŋŋusuγ-; cp. K kiaʀjiŋia- *ashamed*.

kasa-ctun *English language*. K kasaq *Caucasian*, from Russian kazák *Cossack*.

kassuutī- *marry*, kassuutuq. (kassutuq). K kassuutï- *unite* (kaʃ-); WBG katitï- *unite*.

γa-sta *a cook*.

kapï- *stab*, kappuq. NK WBMG YIP kapï-; S BG YIP kapuʀ-; WBMG kaki- *spear, stick*.

kavviaq *fox*, kavviaʀnik *and foxes*. K kaviaq, S kaviapik; cp. B qaviuq.

kafciʀ- *hail*, kafciχtuq. (kafciqtuq). K kafciʀ-; W kavitaq, CG kapitaq *raincoat*.

kamγuuk *boot*, kamγuut, kamγuuk. N kamγux; K kamiksaq; S kamγik (Xwaŋkuta kamhik); I kamik.

γa-n *pot*, γatmi *in pot*. (γan, iγγan). NK γan (N iγan), Ki iγan, Y γan, IP əγan.

kanajutnaq *lush* (kind of fish). Cp. W. kanajuaq, BMG kanajuq *sculpin*.

kanaqnïq *east*. K kanaqniq, WG kanaŋnaq *west wind*, BM kanaŋnaq *northwind*; N kanaa-ni *down there*, G kana *down there, in west*; S BMG YIP kanna *he down there*.

kaɬiq *thunder*, kaɬiχtuq. K kaɬiq; W kallai-; B kalluγ-; G kaγliʀ-.

γaaɬuk *large*.

kak-ɬulitaq *handkerchief*, -t, -k. N kakxix, W kakik, G kakkik *mucus*, Y kakxix, I kakkik, P kakγiγ; K BC kakik *mucus*; K kakitï-, B kakiγ- *blow nose*.

kaŋiiʀaliq *square*. Perhaps cp. W kaŋiʀaluk, B kaŋiγaq *corner indoors*.

kaŋuq *white goose*. N WBCG YIP kaŋuq *snow goose*; S kaŋγuq *snow goose*.

kuimaq *swim*.

kuik *lift*. Cp. N kivï-, K kivγï- (kivγaa), W kiuiγ-, BG kiviγ-.

kuik *river*, kuviiγit, kuviiγik. N kuix, KS kuik (S Rasmussen), BMG kuuk, Y kuix, I kuuk, P kuəγ; G kuuγ- *flow*. Cp. kivï-.

kujaa-piʀaq *spine*. (-γaq, -ʀaq). N kujaχ-pikka *back between shoulders*; W kujaʀuk *lowest part of spine*; G kujak *back between shoulders*.

kujuʀ- *copulate*, kujuχtuq. BM kujaγ-.

kuskaq *cat*. Russian kóʃka.

kuvï- *pour*, kuvvuq. (quuvuq, kuvvuq). G kui-, K BM kuvï-, YIP kuvï-. Cp. kuik *river*.

kuffiaq *coffee* Russian kófji.

kuma- *burning*, kummauq. K kumaʀ- *kindle*; N kuman *lamp*; W kuγuγ-, G kukuγ- *kindle*.

kuuma- *ride*, kuumauq.

kumla *frost*, kumlatuq. K kumlaq *cold*; S kumlamaqï- *frozen* (q-, Xwaŋkuta k-); N kumutï- (q-); N kumlaciq *frozen meat* (q-); also cp. WBMG quaq *frozen meat*.

xuutī- *bite each other*, xuutuk *we two bite each other*. See kxï-.

xuutit *teeth* (pl.), xuutik. NK kxun (N kkγun, K qχun), S xutä (kuti, wuti, Xwaŋkuta xuta), W kiun (kiuun), BM kiγun, G kiγut, Y xun, IP kiγun. See kxï-.

kuulun *ring*, kuluutit, kuluutik.

γliʀ- *travel*, γliχtukut *we travel*. N γliʀa- (γɬiʀauχ), S iγliʀ- (aγillaχtuq), WB iγliʀ-, Y γliʀ-, IP əγliʀ-.

kxï- *bite*, kxxuq, kxxaa, basic stem kiγï-; kxsuγ- *like to bite*, kxsuxtua; kxɬaʀ- *bite*

often, kxłaχtua; kxikiŋï- *bite severally*, kxikiŋuk *two each bite*. NK kxï- (K q-), WBM kiγï-, G kii-, Y kxï-, IP kiγə-.

qipï- *twist*, qippuq. NK WBG YIP qipï- (K k-).

qimik *meat*. (-k, -q). N qimix, K qimik, Y qimix.

qimux-ta *dog*, from *puller*, qimuxtimik *with a dog*. NK qimuxta; W qimuγun *dog*; K BCG YIP qimuγ- *pull sled*.

qitï- *hug*, qittaqa.

qitu-nʀaq *son*, -t, -k. (k-). N qitunʀaχ, K WBM qitunʀaq, G qituʀnaq, Y qitunʀaχ, I qitunʀaq, P qitunʀaʀ. -nʀaq *small*.

χitχaq *surface frost*. Perhaps cp. K qχuu- *cold, numb*.

qinniʀ- *angry*, qinniχtuq. K kiniʀ-, B qinnaʀ-; also cp. CG qiniʀ- *growl, groan, grumble*.

qiłiʀ- *tie*, qiłiχtaa. K qiłiʀ- (qiliχtaa *binds it*, qiłiʀnïq *knot*), WBCG qiliʀ-, I quiliʀ-, YP qiłiʀ-.

qilak *sky*, qilliit, qilliik. N qilax, K WBMG qilak, Y qilax, I qilak, P qilaγ.

qilaʀ- *weave*, qilaχtuq. Cp. qiłiʀ-; also cp. In qilajaq *sew*.

qiluupiγ- *hinder*, qiluupixtuq. Cp. K qiluuʀutut *they slander one another*.

qilut *guts*. K qilut.

qiikuujaq *mud*, -t, -k. Cp. Point Hope qikku, W qiγγu *blue clay for pottery*, G qiquq *lime*.

qiŋaq *nose*. (qi-, qa-). N qiŋaχ, S WBMG qiŋaq, Y qiŋaχ, I qiŋaq, P qiŋaʀ; WG qiŋŋuq *root of nose*.

qiŋŋaaʀuk *snowdrift*, -t, -k. (qiŋŋ-, qiŋ-). Cp. WBM I qimiq *mound of earth or snow*; KiC qimuγjuk, L qimukjuk *snowdrift*; Nome qinu, G qinuq *slush ice*; N qicat *clod of moss*.

qixtuʀiaq *mosquito*. (qiχtojaq). G qiγtuʀiaq, N kxtuʀiaχ (kkt-), WBM kiktuʀiaq, P qiγtuʀiaq, kiγtuʀiaq. Also cp. kxï- *bite*.

qiiχci- *suffer pain*, qiiχciuq. Cp. K qiχciuq *has a deep voice*, S qija-, N WBMG qia- *weep*.

qa- *what*, see qajuuxua *how*, qafciq *how many*, qaŋvaq *when*.

qaiŋ- *surface*, qaiŋani *on it*. NS qaiŋ-, BM qaaŋ-, Y qaiŋ-, I qaaŋ-, P qaəŋ-; G qaak *top*, G qaa *its top*, W qaaγa *its top*.

qajaq *kayak*, -t, -k. N qajaχ, KS WBMG qajaq, Y qajaχ, I qajaq, P qajaʀ.

qajuumi *I don't know*. Perhaps cp. qajuuxua.

qajuuxua *how*. K qajuutun *how much* (k-).

qajuqłiq *jackrabbit*. N qajuχqaχlit *rabbit* (-lit); WBC qajuqtuq *red fox*; perhaps -liq *having*.

qajva-un *ladle*, qajvautit, qajvautik; qajjiuciaq *spoon*, -t, -k. (qazziuciaq). N qajuciax *small ladle*, I qajuutəq *ladle*, P qajuva-; also perhaps cp. NS WBMG YIP qajuq *soup*.

qajγi *meeting place*. S qajγi (qajiγi), WB qajiγi, M qajiγiq, G qaγʃi, Y qajγi, IP qajəγi.

qavviajaq Eskimo dialect, perhaps cp. Rasmussen's qavjasaamiut, inland Seward Peninsula. (qavviaajaq).

qaviʀ- *red*; qaviʀ-li *all red*. (k-). KS B YIP qaviʀ-.

qavaŋŋuʀ- *dream*, qavaŋŋuχtuq. K qavaŋuʀ (k-). See qavaq.

qavaq *sleep*, qavaχtukut *we sleep*; piŋaajuni qavaχaʀuli *for three sleeps, for three days and nights*. NKS qavaʀ- (N qavuχtuχ).

qavja *sand*, -t, -k. (qauza). N qavjaχ (N qawisaq, qawiaq), KS qavjaχ (K qauγiak, S qaujaq), W qaijuaq, B qaviaʀaq, Y qavjaχ, I qavəjaq, P qavəjaʀ.

qavlun *hundred*. (qavlun, kavluun, qavliun)

qafciχχaat *few* (pl.). (-xxaat, -χaat). Cp. N qafsit (qapsit), K qafciq, S qapsinun, G qavsit, WBM qapsit *how many*, Y qafci-, I qapsi-, P qavsi-.

qatiγaq *chest*. (-ʀaq). N qatiγat, K qatiγaq; WG I qatik *breastbone and ribs*.

qatiʀ-li, qatiʀliiqutiq *white*. K qatiʀ- *white*, B qatiʀ- *light-colored*, YIP qatiʀ-; S qaχsuʀ- *white*, Ki qaqsau- *turn pale*, G qaʀsuʀ- *pale*; G qaʃiʀ- *grey*; see also qaniγ-.

qaniγ- *snowing*, qaniχtuq. (-χtuq) S qani-

ɣaʀ-, NK WBNG YIP qaniɣ-. Cp. qatiʀli.

qanĭq *mouth*. NKS WBMG qanĭʀ- *mouth, to talk*, Y qanĭʀ-, IP qanəʀ-; K pl. qanʀit.

qantĭ- *near*, qantuq. S qantaʀaʀ-, WBMG qanĭtĭ-, Y qantĭ-, I qanətĭ-, P qanətə-.

qantaq *dish*, -t, -k. W qatauvaq, BMG I qattaq, N qantaχ, Y qantaχ, P qantaʀ.

qanʀucit *language*, perhaps pl. of *word*, qanʀuciinik *and language*. See qaniq.

qaliiʀuaq *stocking*, -t, -k. Perhaps cp. G qaʀlik, W qaʀliik, BM I qaqliik (du.) *breeks*; also cp. S qullik *breeks* (quɬlik).

qałqapaq *ax*, qałqappiit, qałqappiik. W qalqavaq, S qałqalima.

qakkiaq *fork*, qakkiaʀit, qakkiaʀik. (qakia-, kakia-). S qakkiaʀujun *dog-whip*, W qaɣiaʀ- *whip*, Y qakkiaχ, I qakiaq, P qakiaʀ; N aki-, WBMG YIP kaki- *stab, spear*; BM kakivak *fish-spear*; also cp. kapĭ- *stab*.

qakuq *bread*.

qaŋvaq *when*. S qamva, N qaŋvaχ (qaŋuvaq), WBMG qaŋa *when in the past*; W qaŋami *a few years ago*; NS WBM qaqu, G qaquɣu *when in the future*.

qaʀ- *shout*, qaχtuq. Cp. C quaʀ- *yelp, urge dogs on*; C qavlunaʀ- *howl*; WG qatĭ *voice*.

qaχɬuk *lip*. N χɬu, S qaχɬu, K qaχɬuq, BM qaqlu, W qaʀlu, G qaʀluq *upper lip*, Y qaχlu, I qaqlu, P qaʀlu.

quasqitĭ- *slip*, quasqituq. K quaskiaʀ- (vaskiaχtuq), WG quaitĭ-, P quajəqitə-, quajətə-.

quanŋa- *stupid*, quanŋauq.

qujiq *cough*. (qujaq). K qujiʀ-, WBG quiʀ-, I quiʀ-, YP qujiʀ-.

qujaana *thanks*. K qujana, S BM qujanna; S BM qujanaʀ- *thankful*, K WBCG quja- *express thanks*.

qujuʀni- *smile*, qujuʀniuq. K qujuʀni-, BC quŋusuɣ-, MG quŋujuɣ-.

qujvatĭ- *happy*, qujvatuq. Perhaps cp. qujuʀni-.

quŋiq *reindeer*, quŋit, quŋiik. S quŋiq (Bogoraz), W quŋŋiq.

qusiɣ- *high, steep*, qusixtuq. K quiɣ-, N qusiɣ-, W qusiɣ- (qussiɣ-, qusiɣ-), BMG qutsiɣ-, Y qusiɣ-, IP qutsiɣ-; N quɬli, WBM qula, G quli, I quli, YP quɬi *top, upper part*.

qupĭ- *split*, quppuq. K WB YIP qupĭ-; S qupaʀ- *cracked*; N qupnĭχ, WBM qupaq, G quppaq *crack*.

qutuutĭ- *soft*, qutuutuq.

quunaquq *sour*.

qulit *ten* (pl.), qulni *at ten*, qulnik *and ten*, juinaq qulnik *thirty*. S qullit, NK WBMG YIP qulit. Cp. P qulli *upper part*, since *ten* is the count of digits on upper limbs.

quuɬik *pants*, quuɬiit, quuɬiik. (xoɬik, xooɬiit, xooɬiik). N quɬlik, S quɬiɣik (Xwaŋkuta) *breeks*, cp. qaliiʀuaq *stockings*.

qul-ŋuʀutailŋut *nine* (pl.), qulŋuʀutailŋuq, qulŋuʀutailŋuʀni *for nine* (*days*). N quliŋuʀutailinit, K quliŋunʀitaaʀan, WB quliŋuʀutailat. See qulĭt.

qukaq *middle*. K qukaq (qukkaq) *middle*, K qukaʀ- *reach the middle*, S quqqa *its middle*.

quŋiitĭ- *bury*, quŋiituq. S WKi quŋuq *grave*.

χuq *arrow*, χut, χuk. N χχuχ *arrow, cartridge*, S χuq *cartridge* (Xwaŋkuta xoq), B qaqʀuq, M qaʀjuq, Y χuχ, I qaʀjuq, P qaʀjuʀ.

quuʀuq *valley*, -t, -k. Perhaps cp. kuik *river*.

REVIEWS AND NOTES

METHODS IN STRUCTURAL LINGUISTICS. Zellig S. Harris. University of Chicago Press, 1951. $7.50. xv + 384 pp.

I have been asked to review Dr. Harris' book from the standpoint of a cultural anthropologist who has used the analysis of language only as a research tool on other aspects of culture. It would be necessary to borrow some of Dr. Harris' precision and rigorous felicity to characterize correctly the position of a student of culture in respect to the specialized study of that portion of culture which has been, and perhaps will always remain, the most amenable to rigorous study. The student of culture cannot be called "lay" in respect to the study of linguistics, except with regard to those refinements of method which are also peculiar to any other specialization within the broad field of culture, whether it be the arrangement of potsherds into types, the analysis of the zonal-modal sequences of expressive play in young children, or the special determinations necessary for comparative musicology. Yet, with the sort of fatality with which students of culture become captives of the very categories through which they have sought to escape culture-bound provincialism, there seems to have been an increasing tendency within the broad field of cultural anthropology to perpetuate and accentuate the division between a category called "language" and a category called "culture." Such a tendency may be assigned historically to the very old human recognition that a language (in contradistinction to the rest of culture) has such systematic qualities that it can be "learned" by the immigrant and the bilingual specialist who retain the food habits and even the postural systems of their own cultures. This recognition, which is found all over the world and at all levels of cultural complexity, has now assumed a quasi-scientific form in which the "science of linguistics" is regarded (especially by non-linguists, but lamentably by linguists themselves sometimes) as separate from the study of the rest of culture. This is not the case in Dr. Harris' book, where the "rest of culture" is systematically included in a most thoroughgoing, although often condensed, fashion.

It seems much more profitable to regard linguistics as providing a model for other divisions of the science of culture. Seen in this light, a comprehensive and carefully spelled out study of method like Dr. Harris' book could be used to specify the possibilities of attaining a like precision and rigor in the study of other aspects of culture, especially of the other sensory modalities, considering the degree of systematization that is imposed on them through the circumstances of learning and the demands of communication.

We may first distinguish three aspects of Dr. Harris' method. He analyzes structure on the basis of a corpus of linguistic materials from a particular language, and this corpus itself is defined as sufficient when the addition of further materials does not require alteration or expansion of the analysis already made. But besides this dependence upon analysis in terms of each unique whole linguistic system, there are two other sorts of specification which are possible: an acoustic specification which can be made instrumentally, and a specification based upon the discriminatory capacity of the human ear—included twice, first as specific to a particular language, and also as occurring within certain physiological limits. The essence of the method consists in combining the "objectivity" of machine recording (which stands in back of the linguist's pencil as a kind of validating mechanism to ensure another linguist's "hearing" the same sounds at a different time and place) with precise body-based descriptions, and with objective determination of the subjective experience

of discrimination, in order that the linguistic informant may be subject to a series of "experiments" or repetitive, controlled situations by which this discrimination may be codified. Finally, Dr. Harris stresses the importance of ensuring, by a carefully specified series of steps, that the analysis is related to the particular language as a whole, but he also emphasizes that the particular steps to be followed may be varied, provided they are stated precisely and the observations are recorded in a form that can be reproduced by a fellow linguist.

This particular aspect of the method—that structure must be discriminated rigorously, but that different series of discriminations may be used—raises a fundamental problem in cultural analysis, where it has been found repeatedly that the same cultural materials can be analyzed with different sets of categories, and that the essentials are: accurate recording of a contextual body of data sufficiently extensive to permit its analysis in other ways; accurate specification of the units of observation; and a type of recording that provides analysts using different categories with a set of common referrents (a recorded verbatim unrearranged body autobiographical materials, a sequence of photographs, the whole kinship terminology collected in some way that transcends the particular type of analysis to be used, e.g., which includes recorded terms of address and of reference used within everyday life as well as terms given in response to a geneological chart).

But there are further theoretical problems involved with which Dr. Harris does not deal explicitly in this treatment of method. The possibility of alternative use of different units of analysis is dependent upon the recognition that the analyst of language is dealing with a body of material within which there is a structure, a structure so complexly built that it may be revealed by a series of comparably rigorous operations which are not necessarily identical. It is possible that this property of language, which I assume to be shared in varying degrees with other aspects of culture, may be due not only to the systematic quality of a language, but also to the circumstance that a language's quality of being systematic may be related to a wide range of different human capacities for systemization. What appears, as one follows the repetitive steps of phonemic analysis, morphemic analysis, and grammatical analysis, to be a kind of redundancy of precautionary discriminability may actually be capable of being related to the requirement that a human natural language must be learnable and usable by human beings with varying and different types of discriminatory capacity, of which only the human ability to systematize and generalize may be held entirely in common. Thus, in working with several informants who combine the roles of linguistic and general informant, the different types of hitherto latent analytic ability—the informant who responds plastically to sound patterns, as compared with the informant who looks for more rationalized categories—are very conspicuous. The redundancy of different level precisions that Dr. Harris' method uses and replicates may well be both a precaution against the inevitable noise introduced in any linguistic system by individual differences and an expression of different types of dependence on cues of different sorts.

The immediate significance of this whole methodological presentation for cultural anthropology is the way in which the inclusion of the whole corpus is essential for the definition of analytical units in the language, whereas the specification of each detail can be done separately by referring to physiological and acoustic aspects of the unit. It thus becomes a model that can be used in the critical examination of attempts at cross-cultural analysis of the Human Relations Area File type used by anthropologists, or at content analysis as used by political scientists, both of which attempt to produce a "scientific analysis" merely

by the careful specification of units in a whole which is determined arbitrarily or additively, instead of being treated as the essential largest environment which can then be analyzed into smaller and smaller utterances or comparable units. Dr. Harris' method of determining by carefully controlled series of substitutions which are the meaningful units in a particular language could be used as a check on the sort of work in which the shifting occurrences of a pronoun in a set of propagandic statements are merely counted without including a specification of the position of 'I' and 'We' in the whole system of propagandic statements of a given individual, party, or period, or in which it is insisted that the significance of a particular detail of child-rearing should be determined, not by the specification of this detail in respect to all the other details of child-rearing in that culture, but rather by following this arbitrarily and inevitably loosely defined unit from culture to culture. Careful attention should be paid to the methods used in linguistics to be sure that a phoneme is so described that it can be discriminated by any other trained linguist, and to the methods used to discriminate what the phonemes are in any given language, because to understand these two methods and the difference between them is to be acquainted with the best methodological model I know of in this particular controversy.

The model is a valuable one not only because the students of structural linguistics have gone so far in the application of rigor to their materials, but also because linguistics seems to be the body of learned behavior which is most susceptible to such analysis for the reason that the special relationship between receptor systems and effector systems provides a double sensory standardization. This aspect of language can be highlighted sharply by comparing a few other sensory modalities cross-culturally. Compare, for example, the degree of standardization or systemization that exists between two sets of speakers—an East European Jewish parent and child and a Southern Italian parent and child—when speaking of a divine being. The Jewish speakers mentioning the Lord would have to use the same degree of linguistic accuracy as the Italians mentioning Our Lady, and the linguist could record each with the same procedures. But in the Jewish case, whatever visual images there were in the mind of each are not specified; in the Italian case, the statue of Our Lady carried in processions and cited by both mother and child informants could be photographed, independently, and also reproduced with identifiable accuracy if an Italian parent and child were asked to draw what was in their minds. The same sort of contrasts can be found in discrimination of gesture sequences, in communication which involves culturally patterned food preparation (in which the discrimination involved in eating may be more or less closely related to the discriminations involved in the preparation of the food), or in the handling of infants (where the tonus of the infant may be systematically related to the parental handling, at an articulate culturally shared level, at an inarticulate level which can be ascertained by careful analysis, or so circuitously related to other variables that exact determination is impossible). But whether the image that is evoked centrally in speaker and listener is one in which preparation of the cake (e.g., amount the batter is beaten) is discriminately related to the 'lightness' of the cake, or one which is blurred by the eater's comment that the cake is 'delicious,' whether the mother's fingertips press with the precision of a trained masseuse responsive to the child's learned tautening, or as overflow expressions of her idiosyncratic daydreams, the phonemes and morphemes in the linguistic interchange involved form in either case a closed system, in which the sound that is made and the sound that is heard are kept continually in a tight interrelationship.

Thus, by taking the methods of structural

linguistics as a model, and asking of any cultural study, what is the corpus? how may the units be distinguished? what are the morphological equivalents of utterance and environment and analysis of different levels, such as phonemic and morphemic levels? how may the corpus be recorded for independent analysis, and in what way is it to be related to systematic properties of human beings?—any cultural analysis can be checked for possibilities of precision and rigor.

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METHODS IN STRUCTURAL LINGUISTICS. Zellig S. Harris. University of Chicago Press, 1951. $7.50. xv + 384 pp.

This book, no matter what is said about it, will remain an indispensable part of every linguist's library for many years to come. Harris covers or mentions (sometimes only in footnotes—but what footnotes!) nearly every method of research or presentation in descriptive linguistics that had reached print before he wrote, though the bulk of the book after chapter 9 presents mainly Harris's own special methods. The word 'structural' in the title, supported by some remarks in the introduction, evidently reflects some sort of change of heart during the composition of the book, since much of what is presented in the middle chapters, while definitely descriptive, is not structural as I understand his use of the word in his introductory remarks. This is only one of many evidences that the composition of the book extended over several years, with frequent revisions, insertions, and deletions (which occasionally leave rough spots or obscurities, and nearly always produce an apparent inconsistency). So, for instance, the same topic will turn up sometimes in three or four different places, and quite often cross references are lacking. It is an infuriating experience for a reviewer to think of a beautiful objection on page 93 only to find that it also occurred to the author when he got to page 231. And this happened dozens of times. Sometimes his Appendixes (afterthoughts, I take it, too late to incorporate in the text) almost completely reverse the stand taken in the paragraph to which they are to be appended.

The book (and its title) raise an interesting metaphysical question. On the metaphysics of linguistics there are two extreme positions, which may be termed (and have been) the 'God's truth' position and the 'hocus-pocus' position. The theory of the 'God's truth' linguists (and I regret to say I am one) is that a language *has* a structure, and the job of the linguist is (a) to find out what that structure is, and (b) to describe it as clearly, economically, and elegantly as he can, without at any point obscuring the God's truth structure of the language. The hocus-pocus linguist believes (or professes to believe—words and behavior are not always in harmony) that a language (better, a corpus, since we describe only the corpus we know) is a mass of incoherent, formless data, and the job of the linguist is somehow to arrange and organize this mass, imposing on it some sort of structure (which must not, of course, be in any striking or obvious conflict with anything in the data). Now it may be that these two metaphysical viewpoints are in some sense equivalent, but I suspect that there is at least a psychological effect of the metaphysics on the linguist (and above all, on the student of linguistics). If you look upon a language as a sort of elaborate building which you must map and plan as accurately as possible, so that later visitors may rapidly find their way about it with the aid of your plan, your whole attitude will have about it a respect for the facts, a humility, a patience, a desire for perfection, which is not as likely to be there if you think of a language as a certain select portion of a large pile of shapeless rocks which you may play with and rearrange to suit your fancy (provided you don't break too many of the rocks).

Now I conceive that the term 'structural' implies a God's truth metaphysics, and Harris here and there pays his respects to this point of view, but I must also assert that many, many parts of the book seem to me pure hocus-pocus. Now a certain amount of hocus-pocus is fine; hocus-pocus is, so to speak, the pure mathematics for which the God's truth linguist (like a physicist) may at some time or other find a use. I think all linguists indulge in it frequently, for fun; and it is the greatest fun of linguistics.

A fairly pure example of hocus-pocus is the chapter on Phonemic Long Components (10), particularly the component analysis of Swahili (Appendix to 10.5). This is, so to speak, the hocus-pocus counterpart of Prague School (a God's truth group, whatever their other faults) distinctive feature analysis. I will simply list all phonemes which share components in this analysis of Swahili: no. 1 shared by r, h, b, p, d, t, g, k, i, u, a; no. 2 shared by γ, f, h, p, s, l, t, k, u, o, a; no. 3 by v, f, b, p, z, l, g, k; no. 4 by n, s, z, l, t, d, g, k, i, u, e, o.

Nevertheless, from a God's truth viewpoint, the analysis of clusters and permitted sequences which leads up to this grouping is one bit (and a very important bit) of evidence as to what the distinctive features 'really are'. But since he believes that this is only evidence of something else, a God's truth man wouldn't try to construct anything on this evidence alone, but would run down every other clue he could think of (or have suggested to him by the hocus-pocus man) before trying to present a tentative array of distinctive features (or 'components'—and incidentally why did Harris prefer to violate a principle of English foreign-learned morphology and coin 'componental' instead of the normal 'componential'?). The God's truth man doesn't believe he'll ever find God's truth, but he does believe it exists, and that by trying and working he can gradually approach it asymptotically. Harris uses the phrase 'a further approximation' on page 333, but unless this is one of the late passages where he has been toying with the God's truth metaphysics, it is difficult to see what a hocus-pocus linguist is making successive approximations *to*. I thought perhaps it means "to the last description I make before I die", but on second thought I could think of no reason why a hocus-pocus linguist's successive descriptions should move in any particular direction, and not just wander around at random, so that perhaps the last 'approximation' would be identical with the first, and quite different from those in between.

There is one other piece of hocus-pocus which Harris recognizes as such, and which is probably very useful as long as that fact is recognized. That is the pretense which we make, in presenting our descriptions, that they have been arrived at by performing a series of humanly impossible operations (impossible even with the aid of any electronic computing machines now in existence and financial support far beyond our most enthusiastic dreams). The rigor of linguistics is strictly fake rigor in many instances. And a failure to recognize this fakeness can have (for our poor students) some unfortunate results. We demonstrate that it is possible to determine the phonemes and morphemes of a language entirely without reference to meaning (*if* we had an infinite corpus and a second-order infinite amount of time and money), but in practice we all use meaning and no one makes any efforts to refine our techniques of using it to avoid error, because of the theoretical possibility of doing without it. By the way, an obvious device for ignoring meaning and yet getting an adequate supply of unique contexts is to include in your corpus a complete mono-lingual dictionary (e.g. Webster's International in any corpus of English). As it stands, linguistics is an art, not a science, and the best linguist is the man with the best hunches, the best natural talent for the job, and the best unreasoned and inexplicable feel for language; and

though we can do a little to improve his descriptions so they will be more readily understood and verifiable by other linguists, we can't increase his heuristic skill more than a trifle.

I hope my warmth on this topic will not be construed as unfavorable criticism of Harris; the fact is that Harris is by no means consistently an extreme hocus-pocus linguist, and furthermore has none of that peculiar holier-than-thou contempt for linguists whose metaphysics differs from his that is the common mark of second-rate American scholars.

The number of possible topics for comment raised by this book is so great, that I have had to exercise considerable self-control in confining myself, in what follows, to a few which seem likely to be of most interest.

The question of (phonetic) segmentation is discussed in chapter 3. Harris does not consider the possibility that our present types of segments are due to a historical accident, namely that our alphabet passed first through the hands of Semitic-speakers and then of Greek-speakers, and that in Semitic the base-meaning happens to be associated mainly with certain consonant combinations, as a result of which they ignored the vowel contrasts, while the Greeks, since their language could not ignore vocalic contrasts, retained the consonant signs but added vowel signs, thus making segmentation between vowels and consonants. Experimental work (in spite of Pike) shows that it is very hard to segment here, unless, like Pike, you are willing to say that p, t, k are all moments of complete silence indistinguishable by the ear. Sound spectrograms suggest a different type of segmentation, which can easily be made. Cut at the breaks made by such consonants as the voiceless stops, but since they are all mere blank spaces, represent those blank spaces by the same sign—say T-voiceless stop. Then cut in the middle of a following vowel. This will include the distinguishing element which tells us whether we have t or k, say, as well as the vowel quality. In general, cut everywhere any one of the first three formant bars shows a maximum, a minimum, a point of inflection, or a discontinuity. You will need, then, signs for each distinct type of interruption including characteristic approaches and releases (voiceless aspirated stops, voiced stops, nasals, etc.), for each consonant quality plus vowel quality (labial plus i, labial plus a, and so on), for each vowel quality plus consonant quality (i plus labial, a plus apical, etc.) and in the case of English voiceless fricatives, a special character for each of them that can occur between consonants (as in *glimpsed*, for example), etc. If a_1 = velar start plus æ quality and a_2 = æ quality with apical end, then we could spell *cat* $T^h a_1 a_2 T$, for example. This is all phonetic; the next problem would be phonemicization, now made different by the fact that some of what used to be environment is now included in the segment. I offer this as a nice problem for some young student to work out in detail. We might determine for sure whether or not our present a priori segmentation is due to a prejudice based on an accident of ancient history. In a CVCVCV language, incidentally, where all syllables are open, this segmentation would give the same number of segments, but since such languages often seem to have limited consonant systems, it might in the end boil down to a syllabary.

This simple CVCV . . . language raises another interesting point. Let us say we have an extreme type of Polynesian language (call it Pleistonesian) with 4 consonants, p, n, k, r, and 4 vowels, i, u, e, a. All utterances begin with C and end with V, and consequently all odd positions (counting from the beginning) are occupied by C, and even ones by V. Every C is followed with equal frequency by every V, and vice versa. Now all C are in complementary distribution with all V. It is therefore uneconomical to have separate signs for consonants and vowels,

and following the principles of Harris (7.4) we group them into new phonemes as follows [p] + [u] = p, [n] + [i] = n, [k] + [a] = k, [r] + [e] = r. This grouping is intended to satisfy the requirement of "Identity of inter-segmental relation among segments" of 7.422, as follows "allophones occurring in odd positions are more closed (and non-syllabic); allophones in even positions are more open (syllabic, centralized, oralized)". Now an utterance of Pleistonesian which is phonetically punape keruri will be phonemically respelled ppnkpr krrprn.

Languages such as these are bad for long component analysis, too, since there are no limitations on the distribution of any phoneme. There may, sometimes, be limitations on the occurrence of sequences of two phonemes, so perhaps a syllabary would be more practical as a starting point, and statistics of relative frequency rather than absolute occurrence versus non-occurrence.

There are some peculiar uses of terms scattered through the book. In general, Harris uses 'utterance' to mean what old fashioned linguists called a 'sentence' or 'sentence-fragment', whereas for the traditional meaning of 'utterance' (everything said by one speaker between two distinct periods of silence each longer than three average phonemes) he seems to use the term 'discourse' or 'stretch'. Yet he gives approximately the traditional definition of utterance on page 14. All criticisms of terminology, however, are taken care of in advance by the assertion (2.4) "None of the terms used here can be rigorously defined". And nearly all other possible criticisms are taken care of by frequent assertions that all these things are mere matters of taste, and we are all free to do as we please.

In 4.21 it is assumed that in repetitions of the same utterance at different speeds, all segments are uniformly shortened or uniformly lengthened, so that a given segment always occupies the same fraction of the whole utterance. This is, of course, not so. In a sample pair of repetitions of the utterance "But it can't be more than ten or twelve days" using as nearly as possible the same intonation, phrasing, rhythm and stress pattern, one occupying 2.16 sec., the other 1.86 sec. (about 86% of the longer one), ratios between corresponding phonemes vary widely. The last word 'days' (and each of its segments except initial d) actually turned out to be slightly longer in the fast repetition than in the slow. In 'but' it' the vowels were about twice as long as in the slow repetition, but the intervocalic t was slightly longer in the fast repetition. So no matter which end you started from, if you equated corresponding n percents of length, you would rapidly get out of line, and only here and there, by chance, hit corresponding segments. A better solution might be to use spectrograms and equate segments in corresponding portions of the spectrogram, an operation which could easily be put on an automatic basis.

It is good to see that the elements actually reached by Harris's methods in 4.3 are "phonemic distinctions, rather than phonemes", a point which is often overlooked. The substitution segmentation technique of 4.4 would lead to treating aspirated stops as clusters in languages (e.g. Azerbaijani) in which the corresponding unaspirated stops are voiceless. Yet Azerbaijani has no phonemic initial clusters, and such an analysis would complicate the morphophonemics, too.

The Moroccan Arabic problem raised on p. 65 (7.42), also has a parallel in Azerbaijani. Initially there is in most words no contrast between g (voiceless unaspirated velar stop) and q (aspirated), and many words may occur with either pronunciation. But there are a number of words (all loans) in which educated speakers always pronounce q (aspirated) and a number of others in which they always pronounce g. Harris's solution is that these two are at all times distinct phonemes, and that really staggers me. It means that in the millions of instances where the contrast doesn't matter, you must

always be on your toes to decide which variant was actually used—when even the speaker doesn't know. My own practical solution was to identify the g∼q and the always g as one phoneme /g/, and set up the always aspirated as another phoneme /q/, which I could then use for other, morphophonemic, purposes. A short list will take care of the always g words, if anyone needs to know them.

The problem of the "second mora of long vowels" (7.43) raises an interesting question about English vowels. Unless the assumption (untenable, I think) is made that longer average utterances must always contain more (linear) phonemes than shorter ones, there is another very attractive solution possible for the American English vowel-and-diphthong series. Set up the following as basic vowel phonemes: i as in *sweet*, e as in *hate*, æ as in *bite*, o as in *boat*, u as in *boot*, a as in *bought* and y as in *cute*. Then define post-vocal h as "a quick constriction of the glottis" and write ih as in *bit*, *bid*, eh as in *bet*, *bed*, æh as in *bat*, *bad*, oh as in *but*, *bud*, uh as in *foot*, *hood* and ah as in *hot*, *hod*. On a pure hocus-pocus basis I see no reason to prefer the customary analysis to this one. Simple vowels can now occur in final position, and h has acquired the possibility of occurring between vowel and consonant as well as initially and intervocalically.

Harris's dialect of American English as described by himself contains many odd features. In fact, if I did not know better, I would place it as the speech of someone of European background who acquired English as an adult. In the appendix to 4.23 (39) he suggests that the main difference between *writer* and *rider* lies in the greater length of the stressed nucleus. In my own dialect (which happens to be one of those which contrast intervocalic t and d) when his test sentences are read with the same rhythm and intonation, the nuclei are almost identical in length (that of *writer* about a centisecond longer), and the main difference is that the d is a brief (one centisecond) stop, while the t is no stop at all, not even a flap stop, but a weak fricative. The main difference between the kw sequences in *take one* and in *inquest* (apparently recognized by Harris in his placement of the accent marks) lies in the fact that k in *take one* is syllable-closing only, accompanied by glottal closure and not audibly released, while in *inquest* it is syllable-releasing and audibly released (even slightly affricated). It is also longer in *take one* than in *inquest*. So facultative pause is really not needed here.

In several places (e.g. 5.2, p. 42) Harris assumes that utterance initial p, t, k are always aspirated. In dialects known to me this is so only before stress. No aspiration occurs if the following vowel is unstressed, as in *police*, *canoe*, *toboggan*, though k and t (but not p) usually have some slight salivary friction noise. On the other hand, they are sometimes aspirated medially if in pre-stress position, as in *repeal*, *account*, *attack*. (This applies, of course, to my dialect, though I should like to hear Harris say *police* with an aspirated p). This messes up his definition of juncture in 8.4.

Some of his assertions about impossible ways of saying "Is that a bite?" (6.22, p. 48) are not strictly true in my dialect. I pronounced it four different ways, all accepted as roughly equivalent and quite natural by several other native speakers. Using his numbering system the four would be roughly 01123 (his way), 02223, 00124, and 00002, all with a slight fall at the very end. The fourth way (00002) has some special emotional connotation—boredom, disgust, or something of the sort. (All this assumes that his numbers are phonetic, not phonemic, which I judge to be the case, since he seems to be a contour man not a level man). In the first two ways the pitch of unstressed a (the third number) is distinctly lower, and I might have written 02123 for both of them.

The assumption (8.223, p. 85, n 14) that English question intonation occurs only over whole utterances seems false; the first

half of "Is he coming or going?" as an alternative question may have identical intonation with "Is he coming?" and yet be followed by no pause at all.

On the question (7.4) of assigning the second segments in *spin, stun, scot* to p, t, k or to b, d, g, the evidence of the isolating technique used back in 4.22 is decisive for b, d, g. Erase the initial s from each of those words and most native Americans unhesitantly identify *been, done, got,* without even noticing anything abnormal about the pronunciation. And, though completely voiceless allophones of b, d, g are rare, they do occur; so voicing is perhaps not the best choice (7.421) to represent this contrast in English.

On the *minus, slyness, sly Nestorian* deal of Appendix to 7.3 and 8.4 note 19, I must not speak the right dialect. I recorded these words in contexts, out of contexts, at various speeds and intonations, but only once managed to get the straightforward three degrees of length supposed here, and at that the differences were slight (less than a centisecond between *slyness* and *sly Nestorian*). Usually *slyness* came out as longest and *sly* (*Nestorian*) as shortest. Roughly the same sort of variation appeared in the length of the k when I tried *thicker, thickness,* and *thick Nestorians.*

He apparently says *disdain* and *asbestos* with zd and zb, a pronunciation I have never heard, and this is one oddity that makes possible his abstraction of voicing as a long component in chapter 10. In my dialect zb and zd chiefly occur when stress precedes, as in husband, Lesbian, etc. Similarly (cf. p. 77) I use an aspirated *t* in *distaste* (i.e. have some sort of juncture between s and t) but not in *mistake* mə'steyk.

In pairs like playful tray-full (8.1, p.79), and similarly wistful fist-full, cheerful earfull, and so on, the difference in length is not confined to the first vowel, but applies also to the f and the second vowel, and it is the f which shows the most consistent and greatest variation in length. But Harris seems (cf. 12.53, p. 175) to have accepted the notion that only double consonants (i.e. intersyllabic, closing one syllable and beginning the next) are long. This is widespread, but false. In fact double consonants are often shorter than single ones in the same utterance. What seems to be true is that long single consonants are rarely phonemically long, whereas doubles are nearly always phonemically double. However this length is often part of some juncture or other suprasegmental morpheme. Incidentally, in my dialect of English, double t occurs in *thirteen, fourteen,* and *nineteen* (as well as *eighteen*), so that his statement about morpheme boundaries on p. 175 would be incorrect unless you set up special alternants ending in t for *four* and *nine.* If, now, he takes the difference in nucleus length between *minus* and *slyness* as indicating a juncture, he will also have to write a juncture in the middle of words like *Python, pylon, kibosh, silex,* and so on.

With reference to the celebrated pair *night-rate* and *nitrate,* Harris's statement (8.2, p. 80) that the first t of *night-rate* is aspirated is certainly false for my dialect, where it is rather pre-glottalized (i.e. the vowel is glottally checked) and unreleased, while the t of *nitrate* is strongly released, and may even be aspirated (during the following *r*, of course). Incidentally, why the aspiration which accompanies an r or an l (p. 369) should be called voiceless r or voiceless l, when that which accompanies a vowel is not called voiceless a, e, and so on, I don't know, especially since partially voiceless l and r may occur where there is no aspiration. On p. 282 (Appendix to 16.2) he gives *I see you're leaving* as an example of a contour with main stress on first phrase. In my dialect the main stress is always on *leaving.* In note 44 on the same page he says that NV! does not occur. In my dialect "You hurry!" or "You fellows hurry!" without comma juncture or intonation-break between the parts is normal, especially in double-barreled

sentences of the type "You stay here, I'll go get it".

The hocus-pocus proposal to cut š into sy, etc. on pp. 95–6 (Appendix to 9.2) is not done full justice. First, write iw instead of yuw after all consonants. Then write sr for šr (a bit of phonemic overlapping which Harris's methods allow), thus improving the distribution of s—it now occurs before r, l, m, n, w, y as well as the stops. Write also zy for ž (improves morphophonemics), ty for č and dy for ǰ. Next final (postconsonantal) ə as an allophone of w, əm as m, ən as n, əl as l and ər as r. Now we have achieved a much more regular structure. Final sy, ty, dy are no longer anomalies, being paralleled by sr in saucer /səsr/, by sl in trestle /tresl/, by sm in lissome /lism/, etc. The list of permitted final clusters is altered, but none of the new ones will be unique or peculiar. And the analysis can be applied to dialects which contrast *do* with *due*, and so on (/duw/ and /diw/). If *squirrel* contrasts with *girl*, it will be necessary in such cases to write, e.g., /skwərəl/ as opposed to /gərl/, but cases like this are fairly few.

The chart of the pre-vocalic initials of English on page 153 was badly treated by the printer; some of the horizontal lines are too short, others too long. In the third column from the right, the lines should go all the away across between v and f, through k and through t. All those between f and k should have an open space at tne right, likewise those between θ and t, and the one under the big s box in the bottom half of the diagram. Most of the others don't matter, though the one between w and r should be closed, and that between r and l open (as it is in my copy).

As he says himself, the diagram can easily be improved, most obviously by writing /iw/ for /yuw/ and cutting off the top of the picture. Then incorporate the bottom set into the top set by arranging empty tunnels in columns two and three, (eliminating š by treating it as an allophone of s before r). Then a special route will have to be arranged from s to m and n, but everything else will be O.K.

In connection with the morphological sections of the book, it seems to me that a better and more consistent description of a language could be obtained by distinguishing three kinds of analysis: analysis of productive formations and their alternants (whether productive or not), analysis of non-productive types which are structurally like productive ones, and analysis of symbolic and phonesthematic (including grammatical submorpheme) elements. I should limit the scope of morphology to the first type, call the second descriptive etymology, and the third phonesthematics. The main difficulty lies in the precise delimination of the three fields. Harris has a try at defining 'productive' on pp. 374–5 (20.4), but it cannot be called a working definition, since it involves one of those god-like statistical counts of 'extremely large' corpuses. One can distinguish, as he does, open classes from closed ones, but that seems to be merely the same thing under another name.

The phonestheme problem he tackles (wavering between analyzing and not analyzing, but on the whole favoring non-analysis) on 192–3 (App. to 12.41). We may say that there are two types of phonestheme situation: the problem of stems with partial resemblance of form and meaning (ergo of context), and the problem of grammatical morphemes (affixes, particles, etc.) with such partial resemblance. And while he doubts the expedience of cutting off sl- from slide, slip, slick, etc., he merrily goes ahead (177, App. to 12.22; 192–3, App. to 12.41; 289–95, App. to 16.31) and cuts off th- from this, that, there, then, etc. and wh- from when, why, which, etc., which strikes me as offering identical difficulties. You can get a small paradigmatic set (AZ AY AX, BZ BY BX, CZ CY CX) with there, then, where, when (also thither, thence, whither, whence, if your dialect includes those forms); but so can you with slimy, slip, grimy, grip and many more phonesthemes. I should

propose that we stop morphemic analysis when we reach this point (where paradigmatic sets are small and rare and similar elements do not conform to normal type phonologically), but carry on sub-morphemic analysis in two directions—symbolic sub-morphemes, i.e. phonesthemes, and grammatical sub-morphemes (differentials, in Bolinger's phrase). These units can be defined so that the morphological rule of no residues will not apply. The raspberry problem, which Harris tosses about several times (159, 12.22; 177–8, App. to 12.22; 192–3, App. to 12.41) would be dealt with preferably in descriptive etymology, though Harris could have solved it in his own frame by simply zeroing out the -berry.

As a better illustration of the sphere of descriptive etymology, consider Harris's analysis of *mismanage* and *mistake* on page 89 (App. to 8.2). He cuts both words the same way. But this conceals part of the data. (a) Phonemically the two cases are different: the mis- of *mismanage* has secondary stress and regular i, the other has zero stress and ə or i; the syllable division comes after the s in *mismanage*, before it in *mistake*; the t of *take* is aspirated, that of *mistake* is not. (b) Mentalistically, speakers who use *mismanage* are quite aware of the relation of this word to *manage* (and *manage* will frequently occur somewhere in the context), but there is little awareness (except among the linguistically sophisticated) of a relation between *mistake* and *take*. *Mistake* is most often a noun, *take* most often a verb; *mistake* is learned and used as a single block unit; *mismanage* is learned or put together as two blocks. Analysis of *mismanage*, then, would in my scheme belong to morphology, of *mistake* to descriptive etymology. And the same is true of the English loans from Latin compound verbs discussed on 161 (12.232).

A common source of confusion all through the book is the shifting status of various terms. At one time juncture is a phonemic element, at another a suprasegmental phoneme, at another a segmental phoneme, at another a morphophoneme, and so on; the most annoying of these is the term morpheme, which he uses at one time to mean a sequence of phonemes which occurs as a block (so that East European Poles and telephone poles are the same morpheme), at another such a phonemic shape in so far as it is a member of a specific small form-class, at another a group of such shapes, members of a class, which are in complementary distribution, and so on. While everything can be understood if you have enough patience, it is perhaps not good to place so much faith in the patience of linguists and students, and such terms already in use as morph, allomorph, and the like could be used, limiting morpheme to the group of alternants with a given meaning (set of contexts).

Harris has finally taken revenge on the old linguists who were accused of describing all languages in the mold of Latin. By zeroing out the nominative case and treating case-endings as discontinuous morphemes, and by analyzing long components for gender and number, he reduces the structure of the Latin non-phrase to identity with the Turkish or Hungarian noun-phrase (English, for that matter, except for the cases). And it is quite possible, using these and some of the other engines he has devised in his last few chapters, to write descriptions of Chinese and Eskimo that would be almost identical. It seems almost like some new attempt to construct a universal or logical grammar. From another viewpoint it is an elimination of all the redundancies that uniquely characterize any given language.

If Latin case endings are discontinuous morphemes, you are going to have a terrific number of alternants. Given five suffixes for the nominative singular masculine (or any other case) of Latin nouns, and three for the same case of adjectives, you will have 15 alternants for any phrase with one noun and one adjective, 45 if you add another adjective, and so on. There is, of course, a way out, but the gain seems trivial

at best and requires complicated ways of stating the difference between minimal pairs like filius bona habet ipse and filius bona habet ipsa, or puellae patrem vidi quam tu vidisti and puellae patrem vidi quem tu vidisti, etc. If Latin had a fixed word order, the matter would be trivial, but it didn't.

Harris offers not one but three different ways of handling syntax. Of these I like best the method of Morpheme Sequences (16), which could perhaps incorporate some features of the other methods. A minor point in that chapter concerns taxonomy. I am told that in the biological sciences it is a firm rule that all criteria of classification must be positive. When Harris discusses the "She made him a good husband because she made him a good wife" crux (272, 16.33), he uses a positive criterion (equivalence of "a good wife for him") to identify the second type, but only a negative one for the first. A fairly simple positive criterion for the first would be the insertion of *be* or *to be* between the two N^4.

Though I have expressed some skepticism about using this book with students, I must add that chapter 14 (Morphophonemics) is excellent, also the Appendixes to 18 (Constructions) and to 19.31 (Diagrams), and give information and material not available elsewhere. A full book; everything is in it somewhere or other. And, like the Bible or Shakespeare, you can easily support both sides of any argument with quotations from it.

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LINGUISTIC BIBLIOGRAPHY FOR THE YEAR 1948 AND SUPPLEMENT FOR THE YEARS 1939–1947. Permanent International Committee of Linguists. Utrecht-Brussels: Spectrum, 1951. xxiv + 261 pp.

LINGUISTIC BIBLIOGRAPHY FOR THE YEAR 1949 AND SUPPLEMENT FOR PREVIOUS YEARS. Permanent International Committee of Linguists. Utrecht-Antwerp: Spectrum, 1951. xxiv + 283 pp.

The Permanent International Committee of Linguists began their work with a retrospective bibliography in two volumes which covered the years 1939–1947 (reviewed in IJAL 18.49). The volumes listed above represent the first of the bibliographies which are hereafter to appear annually, but they include as well supplementary items which for one reason or another were omitted in the earlier two volumes. The high standards of excellence set by the 1939–1947 bibliography are maintained in these later works, and the whole collection forms an indispensable tool for linguists whatever their regional interest.

As in the two volumes for 1939–1947, the annual bibliographies are divided into the following general sections (page numbers refer first to the volume for 1948 and second to that for 1949): General Works (1–14, 1–16), General Linguistics and Related Branches of Study (15–57, 17–61), Interrelations between Families of Languages (58, 62), Indo-European Languages (59–174, 63–196), "Asiatic" and "Mediterranean" Languages (175–180, 197–206), Finno-Ugrian Languages (1948 only, 181–194), Uralian Languages (1949 only, 201–206), Basque (1948 only, 195–196), Basque and the Ancient Languages of the Iberian Peninsula (1949 only, 207–209), Hamito-Semitic Languages (197–214, 210–228), Negro-African Languages (215–218, 229–237), Bushman-Hottentot Languages (1949 only, 238), Caucasian Languages (219–220, 239–240), Altaic Languages (221–224, 241–245), Dravidian Languages (225, 246), Burushaski (1948 only, 226), Languages of Eastern Asia (227–231, 247–250), Languages of Indonesia, Melanesia, Polynesia (232–234, 251–254), Australian Languages (235, 255), American Languages (236–241, 256–261), Eskimo and Paelo-Siberian (242, 262), Index of Authors (243–261, 263–283).

A work of this cope necessarily requires the cooperation of linguists everywhere; no editor or group of editors can do it alone. This cooperation and assistance is great-

fully acknowledged in both of the volumes under review:

> We are very glad to find that linguists are complying more and more with our request to send supplementary data. While offering them our thanks we renew our appeal to all linguists who make use of our bibliography and invite them to send us, together with any observations they care to give, all the supplementary data at their disposal: either the titles of their own works, or those of works published in their countries or in their field of specialized studies, which for some reason or other have escaped our notice (Preface, 1949.)

Contributions of this sort should be sent to the Office of the Permanent International Committee of Linguists, Christine Mohrmann, Secretary, 40 Sint Annastraat, Ninueguen, Holland.

It should be noted, finally, that the publication of these volumes, as well as the preceding bibliographies for 1939–1947, has been facilitated "by the moral and financial support of UNESCO through the intermediary of the International Council for Philosophy and Humanistic Studies."

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VOCABULARIO TOTONACO: COORDINACIÓN ALFABÉTICA DEL TOTONACO DE LA SIERRA DE VERACRUZ Y DE PUEBLA. By [Herman] Pedro Aschmann. México: Inst. Ling. de Verano, 1950. Multigraphed, pp. 247.

VOCABULARIO OTOMÍ DE TASQUILLO, HIDALGO. By Enriqueta [= Henérietta] Andrews. México: Inst. Ling. de Verano, 1950. Multigraphed, pp. [xii] + 82.

DICCIONARIO ESPAÑOL-POPOLOCA, POPOLOCA-ESPAÑOL. By Ann Williams and Esther Pierson. México: Inst. Ling. de Verano, 1950. Multigraphed, pp. [x] + 30 + 32.

VOCABULARIO TZELTAL: BREVE COORDINACIÓN ALFABÉTICA DE UNA LENGUA MAYANCE DEL ESTADO DE CHIAPAS. By Mariana C. Slocum (with Egberto Dyk and wife). México: Inst. Ling. de Verano, 1950. Multigraphed, pp. [x] + 54.

VOCABULARIO MIXTECO DE SAN MIGUEL EL GRANDE, OAXACA. [By Anne Dyke.] México: Inst. Ling. de Verano, 1951. Multigraphed, pp. [vi] + 52 + 41.

DICCIONARIO DE LA LENGUA CHATINA. By Howard McKaughan and Barbara McKaughan. México: Inst. Ling. de Verano, 1951. Multigraphed, pp. vi + 64.

VOCABULARIO HUAVE. By Milton Warkentin and Clara Warkentin. México: Inst. Ling. de Verano and Dirección Gral. de Asuntos Indígenas, 1952. Multigraphed, pp. [viii] + 37 + 37.

VOCABULARIO ZAPOTECO DEL RINCÓN. [By Vera Mae Alleman.] México: Inst. Ling. de Verano and Dirección Gral. de Asuntos Indígenas, 1952. Multigraphed, pp. [ii] + 30.

These items are part of a series of dictionaries prepared by persons of the Summer Institute of Linguistics and published by the Mexican branch of that institution. The two earlier dictionaries of the series have been listed previously by this reviewer.[1] Each dictionary is arranged alphabetically by Spanish and by the Indian language. Their vocabularies are limited, ranging from some 200 words in the case of the Zapotec dictionary to about 2500 for the Totonac; no attempt was made to make them conform to a uniform word list.

The dictionaries were designed to function as part of the literacy programs being conducted in the respective language areas; they are consequently set up along different lines than if they had been designed for the use of lingusts only. Their purpose is to encourage literacy in the Indian languages and to provide the newly literate speaker

[1] Zoque: IJAL 15.89–91 (1949); Tzotzil: IJAL 16.107–08 (1950).

with a tool useful in his learning of Spanish; they may serve equally for rural school teachers and others who have occasion to learn one of these languages. In conformity with this purpose, the forms listed are, in most of the vocabularies, complete words rather than morphemes; however, there are usually clues present which enable the linguists to find the stem and morpheme units.

The orthographies used are a type of what this reviewer likes to call an ETHNOPHONEMIC ALPHABET; i.e. an alphabet based upon phonemic features plus relevant cultural factors such as public-school influence, graphemic system(s) used by bilinguals (= traditional Spanish orthography in Mexico), prejudice of local citizenry, etc. The ethnophonemic orthography is directly reducible to a strictly phonemic orthography, and in the case of these dictionaries is usually in fact phonemic, but with some phonemic symbols different from those in the IPA and similar alphabets. Some of these symbols are digraphs from Spanish, others are traditional symbols with non-IPA values chosen out of consideration for Spanish. The introductory materials of the dictionaries give general orthographic orientation in nontechnical terms; the same authors, or their colleagues, have prepared separate phonemic analyses and/or other phonemically written materials for most of the languages treated.[2]

The Spanish style of the dictionaries is not perfect; the authors themselves are apologetic about it. This is in part explainable and perhaps even excusable by the fact (unstated in the dictionaries) that several of the authors have spent most of their time in Mexico studying an Indian language, and in a number of cases have acquired greater facility in the use of it than of Spanish. Several of the books contain illustrative drawings designed to attract the Indian reader and be of use to him; in general these show good adaptation to local culture and environment.

Aschmann's dictionary contains nearly 2500 entries, besides sub-entries, in the Totonac-Spanish section. The dictionary proper is preceded by an introduction in which the orthography used is explained in nontechnical but carefully stated terms; a grammatical introduction is given which includes especially the numerals with their prefixes and the conjugation of the verbs. The latter part is in the terminology of traditional Spanish grammar, and at first blush looks like an old-fashioned Latinized format; however, the paradigms given represent structurally relevant categories of Totonac, and their presentation in the traditional terminology would appear quite justified by the fact that it is designed not primarily for linguists but for Totonac Indians: "The foremost purpose is that the Totonac reader may become familiar with the words and the grammar of Spanish" (p. 3). The section is, within its own limits, of the nature of a pedagogical grammar; Preston has discussed the problem of "cultural limitation on the structure of pedagogical grammars"[3] and the theoretical validity of statements made under such limitations. Verb forms in the Totonac dictionary are cited in their prefixless 3rd person singular present.

The Totonac vocabulary was first multigraphed in 1949, using an alphabet that was less closely adapted to Spanish than is the one used in the present revised and aug-

[2] For published materials see, among other items, Herman P. Aschmann, Totonaco Phonemes, IJAL 12.34–43 (1946); Donald S. Sinclair and Kenneth L. Pike, The Tonemes of Mesquital Otomí, IJAL 14.91–98 (1948); Henrietta Andrews, Phonemes and Morphophonemes of Temoayan Otomí, IJAL 15.213–22 (1949); Marianna C. Slocum, Tzeltal Noun and Verb Morphology, IJAL 14.77–86 (1948); Kenneth L. Pike, Analysis of a Mixteco Text, IJAL 10.113–38 (1944); Milton Warkentin and Juan Olivares, "The Holy Bells" and Other Huave Legends, Tlalocan 2.223–34 (1947).

[3] W. D. Preston, review of Schultz-Lorentzen, A Grammar of the West Greenland Language; IJAL 14.271–74 (1948).

mented edition. The present ethnophonemic alphabet has been approved for Totonac by the Instituto de Alfabetización para Indígenas Monolingües, with which the Summer Institute of Linguistics cooperates. Whereas in the previous edition the phonemes /k, q, w/[4] were so written, we now have /k/ as c ~ qu, /q/ as k, and /w/ as hu. The author reports in personal communication that this change in the ethnophonemic alphabet, now incorporated also in other published materials for the use of Totonac speakers, has done much to help overcome resistance to the acceptance and popular use of the alphabet. In both editions, /c, č, š, h, ɬ/ appear ethnophonemically as tz, ch, x, j, lh respectively; the present edition writes /h/ as h in certain final positions where presumably it differs seriously from the Spanish velar fricative.

Miss Andrews' vocabulary lists some 700 words of Mesquital Otomi. In the ethnophonemic orthography the phonemic alphabet of Sinclair and Pike[5] is modified by changing /c, č, θ, š, x, z, ʔ/ to ts, ch, th, x, j, z̄,' respectively, and the two non-Spanish vowels to barred o and barred u. Note that the macron over the z̄ serves to distinguish it from the symbol z which in Spanish represents a voiceless phoneme. Verbs in Otomi usually show stem alternation, with two or three forms for each stem; however, in the Andrews vocabulary only one form is cited for each verb. Presumably this is the so-called 'primary' form,[6] but no statement is made to this effect; the gloss used is the Spanish infinitive.

The Williams-Pierson dictionary is of the Popoloca of Puebla, dialect of San Felipe Otlaltepec. The alphabet is listed and popularly explained in some detail; verbs are cited in the 3rd person singular present (or future in verbs whose present is lacking). Some 500 Popoloca words are listed. Pages 30–32 show numeration, hours, monetary system, and a few place-names.

The Tzeltal vocabulary of some 300 words appears in an ethnophonemic orthography that employs only Spanish symbols and apostrophe; the phonemes /c, č, c', č', h, š, ʔ/[7] are written respectively as ts, ch, ts', ch', j, x,'. In both sections of the dictionary the verbs are cited in their bound stem forms, with a preceding hyphen; one or more examples of complete words based on the bound stem are given in parentheses in each case. Nouns that are always possessed are cited in the Spanish-Tzeltal section with the 3rd person prefix; in the Tzeltal-Spanish section they are listed in their alphabetical place preceded by a hyphen, with the possessed form in parentheses. Numerals are listed on pp. 28–29.

The Mixtec vocabulary has about 1400 entries (plus many sub-entries) in the Mixtec-Spanish section and about 2000 entries in the Spanish-Mixtec section. Both sections include phrases or sentences illustrating the Mixtec words. In the Spanish-Mixtec section the Spanish infinitives are generally not assigned a direct Mixtec equivalent, but one or more phrases are given; e.g. "*abrazar*: *le abraza*, nánuu táhande; *abrazó al niño*, nī junu nchaā-de-i." The corresponding entries in the Mixtec-Spanish section read: "*júnu nchaā* (cụnu nchaā) abrazar; . . . *nanuu táhan*, abrazar." The two sections are not simply cross-referenced lists, but due to the illustrative material in both sections there is considerable unrepeated data; thus the dictionary contains, within its modest scope, a wealth of semi-analyzed material useful for further analysis. An introductory note discusses the verbs briefly and indicates that verbs diiffering only in tone between present, past, and future are cited in the future only; and that verbs differing segmentally between the future and the present are cited in both forms.

[4] For phonemic analysis see Aschmann, op. cit.

[5] Op. cit.

[6] Cf. Stanley Newman and Robert Weitlaner, Central Otomian I: Proto-Otomí Reconstructions, IJAL 16.1–19 (1950), esp. p. 8.

[7] See Slocum, op. cit.

Ethnophonemic adaptations in the Mixtec phonemic alphabet[8] show, for this and other materials for the use of Mixtec speakers (including materials prepared by Pike), rather extensive modification. Changes resulting in Spanish symbols or Spanish symbol-values include the change of /č/ to ch, /š/ to x (which also does duty for /š́/) /k/ to c ~ qu, /kʷ/ to cu, /b/ to v, /ʔ/ to h, /h/ to j, /ž/ to y (y in Oaxaca Spanish is phonetically [ž]), and the prenasalized /ⁿd, ⁿǰ, ᵑg/ as nd, nch, ng. /ə/ appears as i; low tone /ˋ/ as (⁻).

In the Chatino dictionary, verbs listed as Spanish infinitives in the Spanish-Chatino section appear in the 2nd person of their future, present, past, and imperative forms; in the Chatino-Spanish section each of these forms is listed as a separate alphabetical entry and glossed with its Spanish translation. Nouns are classified in the Spanish-Chatino section as always possessed, never possessed, and optionally possessed; members of the first of these classes are cited with the 2nd person possessor. Pages 25–31 show sample paradigms of verbs and nouns, and a list of numerals. There are approximately 800 entries in the Chatino-Spanish section and 500 in the Spanish-Chatino; the difference is presumably due to the citing of each verb separately in each of its forms in the Chatino listing.

The Huave vocabulary is from San Mateo del Mar, which is the largest and most monolingual of the Huave communities and dialects. The work contains some 2000 entries in its Huave-Spanish section. Ethnophonemic changes in the alphabet[9] are at a minimum: /ȼ, č, š, h, ɪ/ appear as ts, ch, x, j, ɛ; and the symbols f, u are introduced in Spanish loans. The substitution of ɛ for ɪ is presumably for pedagogical rather than cultural reasons: ɛ is probably a more distinctive symbol for the newly literate than is ɪ. Verbs appear in the dictionary in their 3rd person singular forms. Perhaps the appearance of this vocabulary will enable someone to examine further the disputed genetic affiliations (or lack of such) of Huave; a cursory look certainly fails to give an impression of Zoquean relationship.

The Zapotec vocabulary is in the so-called Rincón dialect; it is an experimental edition of 50 copies, containing 194 entries in its Zapotec-Spanish section plus 103 numerals. The phonemic analysis appears to be tentative, with considerable ethnophonemic adaptation; the only suprasegmental feature written is 'acento', which is marked by acute accent. Its features of large type and profuseness of illustration constitute a format that might prove especially attractive to the newly literate and pre-literate native speakers for whom it is designed; its chief limitation for the linguist is its brevity.

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UN VOCABULARIO CARIBE DEL ORIENTE VENEZOLANO. By Julio Febres Cordero. Revista Nacional de Cultura, No. 57 (1946), Caracas.

This paper consists of a commentary by the author, who laments the miserable condition of the Venezuelan Indians, "sin tierra propria en la tierra que fuera únicamente suya," and the inadequacy of published materials concerning them (3–7); a Spanish-Carib vocabulary of 175 words and "fragments of the conjugation of some verbs" collected more than a hundred years ago by J. A. Freyre Mayobre (7–16); and "unas glosas" by M. Figuera Montes de Oca, reprinted from a weekly journal of the year 1880 (16–18).

Mayobre tells us, in an introductory note dated November 1847, that the material presented was obtained hastily from "an individual of the Carib tribe" during "a few moments" of the latter's short stay in the capital; and that his informant's difficulty in making himself understood, combined with his own in representing in Spanish the sounds of an unknown and entirely dif-

[8] See Pike, op. cit.
[9] See Warkentin and Olivares, op. cit.

ferent language, make it "more than probable that the contents of the present vocabulary are not very exact." The language is definitely Cariban, and probably, to judge by the slight grammatical data, a dialect of true Carib (Kalina); thus the first person of transitive verbs is marked by the prefix s-, that of intransitive verbs by w-, (ceenen *I see* cenaapuiñe *I eat*, wenu-zá *I sleep*). Mayobre's recording, in an attempt to profit by such a fleeting opportunity, and now Cordero's publication of this material deserve only praise; but that it should remain, after the interval of a hundred years, the best sample of east-Venezuelan Carib seems strange indeed.

That these dialects did not immediately become extinct is evident from Figuera Montes de Oca's version of a Carib war song celebrating the victory of the "Cariñate" over the Cumanagoto, and in which mention is made of the Rivers Guanipa, Güere, Unare, and Orinoco. The author includes in his "free translation" some three dozen Carib words, and gives their meanings in footnotes. Twelve of these appear to correspond to words listed by Mayobre; they are (in their writers' own spellings, and with Mayobre's forms first): parana, parana *sea*; wepwctu, pepeic-che *wind*; uekeure, buquiere *man*; wooli, weric *woman*; veez, vedu *sun*; mune, umiere-mire *blood*; tuuna, tuna *water or river*; noono, nono *earth or world*; caapo, cap *sky*; arecu, aricén *war*; autó, aucto *house or home*; io-zó, yorosco *God or good spirit*.[1] About a third of the words listed by Mayobre, and two thirds of those given by Montes de Oca, had correspondences in early Dominica Island Carib 'men's speech' while a much higher percentage is to be found in Galibi.

It is to be hoped that the publication of this paper in a journal issued by the Direccion de Cultura of the Ministerio de Educacion Nacional of Venezuela is a sign of awakening interest in the native cultures and languages, and that we shall soon see the results of some modern research in that direction.

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[1] Mayobre says of the vowels here written in small capitals that they had "una pronunciación fugaz y poco perceptible".

Concerning Marxism in Linguistics. By J. V. Stalin. London: "Soviet News," 1950. 40 pp., 6d.

This pamphlet includes translations of Stalin's article of June 20, 1950, and of his letters of reply to Soviet linguists dated June 29, July 11, July 22, and July 28 of the same year, appearing in Pravda. The whole of this controversy has been ably reviewed by Rubinstein;[1] and I shall confine myself here to the discussion of some particular aspects of the author's views on language.

Language, according to Stalin, belongs neither to the 'basis' (the economic or subsistence structure of a society) nor to the 'superstructure' (defined as "the political, legal, religious, artistic, philosophical views of society and the political, legal and other institutions corresponding to them"[2]); for whereas "the superstructure is a product of the basis . . . , language is not a product of one or another basis, old or new, within the given society, but of the whole course of history of the society and of the history of the bases for many centuries."[3] The mistake of certain comrades is "that they identify and confuse language with culture. But culture and language are two different things. . . , culture changes in content with every new period in the development of society, whereas language remains basically the same through a number of periods . . ."[4] Are these comrades unaware, Stalin asks, "that national language is a form of national

[1] Herbert Rubinstein. The Recent Conflict in Soviet Linguistics. Lg 27.281–287, 1951. [See also William Bull's review of The Soviet Linguistic Controversy (Columbia Univ. Press, 1951) in IJAL 18, no. 3, 1952—HH.]

[2] J. V. Stalin, op. cit. 3.

[3] Ibid. 3–4.

[4] Ibid. 14–15.

culture . . . that the present Russian, Ukrainian, Byelorussian and other cultures are socialist in CONTENT and nationalist in FORM, i.e. in LANGUAGE?" (emphasis mine).[5] Apart from the division of culture (in the American sense) into two layers, this thesis is not unlike that advanced by Sapir more than thirty years ago, and which he summarized in two sentences: "Culture may be defined as WHAT a society does and thinks. Language is a particular HOW of thought."[6]

But Sapir, a few lines further on, makes this reservation: "If it can be shown that culture has an innate form, a series of contours, quite apart from subject matter of any description whatsoever, we have a something in culture that may serve as a term of comparison with and possibly a means of relating it to language." Today some anthropologists recognize a rigorous structuring of society as distinct from culture, but have made no attempt to compare it to that of language. Evans-Pritchard divorces social structure from culture in much the same terms as Stalin divorces the latter from language:

> Nomadic Bedouin Arabs have in some, and basic, respects the same kind of social structure as some of the semi-nomadic Nilotic peoples of East Africa, but culturally the two peoples are different. Bedouin live in tents, Nilotics in huts and windscreens; Bedouin herd camels, Nilotics cattle; Bedouin are Muslims, Nilotics have a different kind of religion; and so forth.[7] . . . he [the social anthropologist dealing with problems of social structure] pays attention to the social relationships of the persons concerned in the whole procedure rather than to the details of its cultural expression. . . . In comparative studies what one compares are not things in themselves but certain particular characteristics of them. . . . One necessarily starts, therefore, by abstracting these relations in each society from their particular modes of cultural expression.[8]

Similarly Stalin, after explaining how grammar deals with the relations between classes of sounds, morphs, words, and phrases, rather than with those between their particular concrete manifestations. says:

> In this respect grammar resembles geometry, which in giving its laws abstracts itself from concrete objects, regarding objects as bodies not taken concretely, and defining the relationships between them not as the concrete relations of concrete objects but as the relations of bodies in general, not taken concretely.[9]

However, some other anthropologists now believe not only that such dichotomizing ("basis and superstructure," "social structure and culture") is unnecessary, and that purely formal patterns of undivided 'culture' can be discovered, but also that such patterns show affinities (though not perhaps correlations) with the formal patterns of language.[10] At the same time it remains true that "When it comes to linguistic form, Plato walks with the Macedonian swineherd, Confucius with the head-hunting savage of Assam,"[11] since such affinities, if they are proved, concern the 'how' and not the 'what'—of human behavior as of human thought.

"A language's grammatical system changes even more slowly than its basic word stock."[12] This would appear not to be true at least in the case of English, which has retained 85%, according to Swadesh, of its basic vocabulary of 1000 years ago, but whose grammatical system is very different today even from that of the fourteenth century (contrast Chaucer's 'it am I' with our 'it is I/me').

Probably most modern linguists would

[5] Ibid. 15.

[6] Edward Sapir. Language. New York, 1921. 233.

[7] E. E. Evans-Pritchard. Social Anthropology. 1951. 16.

[8] Ibid. 18.

[9] J. V. Stalin, op. cit. 17.

[10] See, for example, Harry Hoijer, Cultural Implications of Some Navaho Linguistic Categories (Lg 27.111–120, 1951) and the various articles by Benjamin Lee Whorf cited therein; and Claude Levi-Strauss, Language and the Analysis of Social Laws (AA 53.155–163, 1951).

[11] Edward Sapir, op. cit. 234.

[12] J. V. Stalin, op. cit. 18.

agree with Stalin that "language crossing of, say, two languages" does not result in a new mixed language qualitatively different from either, although the vocabulary of "the victorious language is somewhat enriched from the vanquished language" in the process; but that "one of the languages persists, retains its grammatical system and basic word stock and is able to develop in accordance with its inherent laws of development" (compare Sapir's 'drift').[13] Stalin recognizes moreover that political conquest may well be followed by linguistic defeat, and cites as examples the Normans in England and the Turks in the Balkans.[14] However, all this is true, he says, only so long as "the crossing of languages takes place in the course of a struggle for the domination of one of the two languages." This will no longer be the case "*after the victory of Socialism* on a world-wide scale," when we shall be confronted, "not by two languages, one of which is suffering defeat, ... but by hundreds of national languages, out of which as a result of lengthy economic, political and cultural co-operation of nations, there will emerge first the most enriched zonal languages, then the zonal languages will merge into a common international language which ... will be neither German, Russian nor English, but a new language which will have absorbed the best elements of the national and zonal languages."[15]

What will happen when "national equality will have been put into practice" and the rest of the author's ideal conditions obtain throughout our world is a matter for speculation only. Yet it may be noted that, in Switzerland, where the "policy of suppressing and assimilating languages" is unknown, German, French, Italian, and Ladi n (Romantsch) have long maintained themselves in close contact without either victory and defeat on the one hand or the emergence of an "enriched zonal language" on the other. Moreover, while it is at least possible to conceive the emergence, under the conditions envisaged by Stalin, of something like an "eskhato-Slavic," an "eskhato-Sino-Tibetan," etc., or even that of a "Standard Average European" and a "received East-Asiatic," one cannot well imagine the occurrence, on an equalitarian basis, of any profitable merger of these last two—not to mention other zonal languages.

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[13] Ibid. 21.
[14] Ibid. 12, 18–19.
[15] Ibid. 38–39.

RECENT PUBLICATIONS

General Linguistics

Allen, W. S. Phonetics and Comparative Linguistics. Archivum Linguisticum 3.126–136, 1951.

Collinder, Bjorn. Three Degrees of Quantity. Studia Linguistica 5.28–43, 1951.

Gardiner, A. H. The Theory of Speech and Language. Second edition. Oxford: Clarendon Press, 1951.

Garvin, Paul L. and Riesenberg, S. H. Respect Behavior in Ponape: An Ethnolinguistic Study. AA 54.201–220, 1952.

Hall, Robert A. Jr. American Linguistics 1925–1950. Archivum Linguisticum 3.101–125, 1951.

Hall, Robert A. Jr. Idiolect and Linguistic Super-Ego. Studia Linguistica 5.21–27, 1951.

Harris, Zellig S. Discourse Analysis. Lg. 28.1–30, 1952.

Hoenigswald, Henry M. The Phonology of Dialect Borrowing. SIL 10.1–5, 1952.

Jakobson, Roman, Fant, C. G. M., and Halle, Morris. Preliminaries to Speech Analysis. Technical Report no. 15. Acoustics Lab., Massachusetts Institute of Technology, 1952. 53 pp.

Linguistic Bibliography for the year 1949 and supplement for previous years.

Permanent International Committee of Linguists. Utrecht-Antwerp: Spectrum 1951. xxiii + 283 pp.

Ljunggren, K. G. Toward a Definition of the Concept of a Preposition. Studia Linguistica 5.7–20, 1951.

Nida, Eugene A. God's Word in Man's Language. New York: Harpers, 1952.

Penttilä, Aarni. Concerning the So-called Parts of Speech. Studia Linguistica 5.1–6, 1951.

Voegelin, C. F. & Harris, Zellig S. Methods for Determining Intelligibility among Dialects of National Languages. Proc. Amer. Phil. Soc. 95.322–329, 1951.

American Indian Languages

Milewski, Tadeusz. La structure de la phrase dans les langues indigenes de l'Amérique du Nord. Lingua Posnaniensis 2.162–207, 1950.

Sebeok, Thomas A. Materials for an Aymara Dictionary. JSAP 40.89–151, 1951.

Trager, George L. Linguistic History and Ethnologic History in the Southwest. Journ. Wash. Acad. of Sciences 41.341–343, 1951.

Young, Robert & Morgan, William. A Vocabulary of Colloquial Navaho. U. S. Indian Service, Washington, D. C., 1951. 461 pp.

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